



# **NAVAL POSTGRADUATE SCHOOL**

**MONTEREY, CALIFORNIA**

## **THESIS**

**PEOPLE-FIRST HOMELAND SECURITY:  
RECALIBRATING FOR COMMUNITY  
COLLABORATION AND ENGAGEMENT WITHIN A  
HOMELAND SECURITY ECOSYSTEM**

by

Angela Yvonne English

December 2014

Thesis Co-Advisors:

Carolyn Halladay  
Rodrigo Nieto-Gomez

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HOMELAND SECURITY ECOSYSTEM**

Angela Yvonne English  
Executive Director, Texas Governor's Committee on  
People with Disabilities, Austin, Texas  
B.A., Carson-Newman College, 1979  
M.S., Baylor University, 1986

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December 2014**

Author: Angela Yvonne English

Approved by: Carolyn Halladay  
Thesis Co-Advisor

Rodrigo Nieto-Gomez  
Thesis Co-Advisor

Mohammed Hafez  
Chair, Department of National Security Affairs

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## ABSTRACT

The nation's socially constructed deficit-oriented discourse and linear organizational structure is incongruent with the decentralized, interconnected, and complex adaptive problems faced by homeland security. The thesis question is: *Can the homeland security enterprise benefit from a people-centric, strengths-based systems approach to increase the nation's ability to adapt, withstand and recover from disasters?*

In the current linear dominated "all-hazards" world, the ranks are experiencing less trust, less security, less cooperation, less effectiveness, and less happiness. In contrast, a people-centric, strengths-based world, in which community is central, features more involvement, more trust, more resiliency, more participation, more inclusiveness, and more empowerment. This thesis aims to show that the collective of homeland security needs an "all-opportunities" plan, a new way of thinking, based on the strengths of communities and the willingness of the American people to contribute. The concepts of appreciative inquiry, positive deviance, social network analysis, and social construction examined in research and case studies were used to provide recommendations for the future. The thesis posits that the homeland security enterprise has evolved into a homeland security ecosystem due to globalization, social complexity, ubiquitous smart technologies, and the ability of communities of interest to form outside of traditional organizational structures.

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## LIST OF ACRONYMS AND ABBREVIATIONS

9/11	September 11, 2001
AARP	American Association of Retired Persons
AI	appreciative inquiry
CNO	Chief of Naval Operations
DHS	Department of Homeland Security
DOD	Department of Defense
FEMA	Federal Emergency Management Association
FNSS	functional needs support services
FNSS Taskforce	functional support services taskforce
GAO	Government Accountability Office
GCPD	Governor's Committee on People with Disabilities
INSNA	International Network of Social Network Analysis
M-HLS	mobile homeland security
MIT	Massachusetts Institute of Technology
MRE	meals ready to eat
NCD	National Council on Disability
NGO	non-governmental organization
NPR	National Public Radio
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
ONE	Operation Noble Eagle
PD	positive deviance
PPD-8	Presidential Policy Directive 8
QHSR	Quadrennial Homeland Security Review
SEC	Securities Exchange Commission
SNA	social network analysis
SNS	Social networking sites
SUNBELT	SUNBELT Conference on Social Network Analysis

TDEM	Texas Division of Emergency Management
U.S.	United States
UCINET	University of Network Integrated Telematics Services
VA	Veterans Affairs

## **EXECUTIVE SUMMARY**

Since the creation of a Department of Homeland Security (DHS) in 2002, the practice of homeland security has been constructed around a top-down system, reactive in nature, based primarily on responding to terrorist acts and natural disasters. When security becomes a reactive enterprise, pursued only after threats become manifest, the effort ends up being costly, ugly, and largely ineffective. Americans do not expect their lives to be risk-free and have proven themselves to be up to the task for playing an important role in securing the homeland. Today, a paradigm shift is occurring through emerging technologies and adaptive community systems that can provide some insight into the nation's future resilience. The homeland security enterprise has become so locked within a problem-centered, critique-driven worldview that it has severely limited its potential for innovation and transformation.

Utilizing an appreciative inquiry framework, examining the nation's strengths and assets, its people and communities, could strengthen its future homeland security system. This shift from a deficient and lessons learned discourse to an appreciative inquiry discourse means this nation pivots from looking backward at mistakes to being proactive and building a system of resiliency for the future based on the strengths of communities.

The homeland security enterprise wants people in their communities to be resilient, by adapting to, withstanding, and recovering from disaster. However, some consideration should be given to understanding the human systems in communities that help build strength and lessen vulnerabilities. With complicated or successive crises, sustained engagement with the actual community is needed. The top-down, one-size-fits-all-hazards approach falls short every time. Moving from an "all hazards" plan to an "all-opportunities" plan is needed to move the country forward collectively. Historically, the federal government has held a paternalistic attitude toward its citizens and the security apparatus is one of a patron-client relationship. Perversely, in many quarters, ordinary citizens are viewed as part of the problem rather than the solution, which is firmly in the purview of the homeland security professionals. Instead of individuals and communities bouncing back, a forward-looking homeland security helps communities before disasters

by building on their strengths so they can flex and adapt more readily to any challenges that come their way. In this way, the homeland security community and the communities it serves evolves into an ecosystem.

The fact is that the homeland security enterprise was intended to be more of an ecosystem, composed of sub-systems, all of which are connected in some way, although it still functions primarily in a linear way. In an ecosystem, awareness of the other parts of the system is important, versus just knowing one part in isolation. In a systems approach, inclusion and participation are vital, welcomed, and necessary. It is a movement away from events and objects to relationships and connections. The connective tissue of the homeland security body is community, community within the enterprise and outside of it.

As U.S. demographics are changing, so too are the technological advancements in social media and social network applications for collaboration like the nation has never seen before. This new “sharing” environment offers numerous opportunities for ordinary Americans to interact in the homeland security enterprise. Communities are complex systems with the ability to organize without the benefit of an outside entity. This complex adaptive system is characterized by a large number of interconnected parts that provide challenge and opportunity. Traditional organizations, traditional forms of control and planning, are minimally effective for complex threats. Today’s world is becoming increasingly complex. Unfortunately, this nation’s style of thinking rarely matches this complexity.

The increase in social connection and demographic diversity allows for a more nuanced and creative bottom-up approach to homeland security. The lesson for the homeland security ecosystem is that the geopolitics of governmental proximity is important. Power is becoming more centralized at the local level. Mayors and local authorities manage community proximity very differently because it is easier on a smaller scale and it is more personal to the community. It is important for those in homeland security to understand that to ignore the dynamics of geopolitical proximity, changing migrations, demographics and will of the people, do so at their peril.



Interestingly, disaster after disaster, both big and small, citizens are taking matters into their own hands to provide for their safety, families, neighbors, and community. Appreciative inquiry's capacity building process seeks to identify a system's strengths, which a proactive social construction of reality can be tied to cooperative acts. These two dynamics hold the promise to move away from constantly correcting lessons learned to imagining a future based on the systems strengths and then actively designing a system that fits the challenge. The social construction of knowledge is based on the words, language and acts *chosen* within the community. This kind of knowledge is developed and transferred into a kind of general understanding and over time into sustained behavior. For a community, if social construction joins hands with its sister, appreciative inquiry, great potential exists for change. The human-centric trait of cooperative acts and desire to help is a valuable part of the nation's strengths and assets, and a powerful resource for the future homeland security ecosystem. Additionally, all communities have positive deviants, catalysts, and connectors, and those who have profound social influence in communities. The key is to identify them and utilize their positive deviance for social change within the community. In examining homeland security's biggest challenges, those that are decentralized, unpredictable and complex, utilizing people, peer-to-peer connections and the *share, then gather* mindset is profoundly powerful. Whether it is food, transportation or shelter during a disaster, mustering the potential of the social dynamics of people could greatly foster resiliency at the most basic level without any government assistance. It will also require open communication.

The power of language is transformational. A new social construction of homeland security will require a change in the language used to be more inclusive and welcoming to the community, to both internal and external customers. Every community, through its language, cultural diversity, and local actions socially constructs its environment. It is in this context that the homeland security enterprise can use social network analysis of existing social networks in the community to leverage the strengths of the community. Social networks are powerful human systems. Social networks have a profound ability to influence the thinking and behavior of people within the networks.

Human beings self-organize into groups, communities, civilizations, and economies as a response to collective needs or threats.

The thesis explores the nation's demographics, social dynamics, language and social networks to posit that its greatest resource is people.

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## **I. INTRODUCTION**

Imagine if healthcare or business operated like the current homeland security enterprise, and only focused on the problems, what went wrong, which mistakes caused which failures, rather than focusing on the health or wellness of patients, or why products and services actually sell. Nothing would change, except perhaps in a spasmodic response to yet another calamity. Yet, homeland security continues to view itself and the world in exactly these terms. Homeland security practitioners think, talk, and act in an “all-hazards” framework, oriented toward deficits and catastrophe, a reactive whack-a-mole response. Their vaunted “lessons learned” only measure the problems while doing little to identify the strengths or potential of the homeland security enterprise. In the process, solutions, synergies, and successes get lost in the seemingly endless cycle of failures and reform.

In a linear dominated “all-hazards” world, the ranks are experiencing less trust, less security, less cooperation, less effectiveness, and less happiness. In contrast, a people-centric, strengths-based world, in which community is central, features more involvement, more trust, more resiliency, more participation, more inclusiveness, more participation and more empowerment. This thesis aims to show that the collective of homeland security needs an “all-opportunities” plan; a new way of thinking, based on strengths and people.

### **A. RESEARCH QUESTION**

The thesis explores the following question:

*Can the homeland security enterprise benefit from a people-centric, strengths-based systems approach to increase the nation’s ability to adapt, withstand and recover from disasters?*

### **B. PROBLEM STATEMENT**

The homeland security enterprise wants people in their communities to be resilient, by adapting to, withstanding, and recovering from disaster. However, some

consideration should be given to understanding the human systems in communities that help build strength and lessen vulnerabilities.

The problem begins with the way that the homeland security enterprise appropriates the communities that it serves. In other words, the homeland security enterprise can be a stagehand to what is happening at the community level. In this context, it works behind the scenes and supports the work that occurs for and by people who know the community best. However, the prevailing wisdom within the homeland security enterprise today all but excludes the community, except as a notional collection of would-be victims. The upshot—pushing people away and then blaming them for not being there—is a dysfunctional system. Security “solutions” may or may not fit the needs of the community that is expected to enact or at least accept them. Meanwhile, homeland security practitioners cannot begin to understand why some communities are more resilient after disasters than others or why some homeland security measures work while others sit on shelves, or worse, burble into the headlines as new failures.

The trouble begins with the manner in which the homeland security enterprise imagines, plans for, and tackles its missions. A singular solitary crisis, such as a plane crash or wildfire, may respond well to a linear response, although success is not assured even in a single case, as the homeland security enterprise has discovered. However, over the longer term, with complicated or successive crises or sustained engagement with the actual community, the top-down, one-size-fits-all-hazards approach falls short every time.

As an example, Hurricane Katrina found—even after 9/11—a nation unprepared for catastrophe.<sup>1</sup> In the late summer of 2005, millions watched the satellite images of Katrina as the storm moved through the Gulf of Mexico and drove menacing swells of water toward the American coastline. Thousands of people were stranded and hundreds of people died in flooded houses and nursing homes, while others languished in the heat and squalor in dark stadiums or rooftops. Those watching on television were empathetic and bewildered as the Katrina catastrophe revealed confusion, delay, misdirection,

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<sup>1</sup> Spencer S. Hsu, “Katrina Report Spreads Blame,” *Washington Post*, February 12, 2006, <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/11/AR2006021101409.html>.

inactivity, poor coordination, lack of leadership at all levels of government, and poor planning by the communities involved.<sup>2</sup> At the root of Katrina was social complexity related to people and the systems people depend upon and a lack of coordination of the systems of interconnected agencies and communication.

The fact is that the homeland security enterprise was intended to be more of an ecosystem system, composed of sub-systems, all of which are connected in some way, although it still functions primarily in a linear way. In an ecosystem, awareness of the other parts of the system is important, versus just knowing one part in isolation. In a systems approach, inclusion and participation are vital, welcomed, and necessary. It is a movement away from events and objects to relationships and connections.

Yet, historically, the federal government has held a paternalistic attitude toward its citizens and the security apparatus is one of a patron-client relationship. Perversely, in many quarters, ordinary citizens are viewed as part of the problem rather than the solution, which is firmly in the purview of the homeland security professionals. Most homeland security guidance documents from the National Strategy to the Quadrennial Reviews are the product of this hierarchical mentality, which is good at telling its subordinates what to do.<sup>3</sup> This perspective is reinforced by a government communication strategy that operates on the basis that national security information should only be shared with those who have a “need to know.” Even within the government, the only people allowed access to details of national security are those with the appropriate credentials.

Much debate still occurs that this nations’ current homeland security concerns center on issues with structure and process that are still-fragmented within and between all levels of government.<sup>4</sup> This mentality fails to recognize the changing social landscape of the ability of state and local governments, citizens, and public-private partnerships,

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<sup>2</sup> *Hurricane Katrina: A Nation Still Unprepared*, Committee on Homeland Security and Governmental Affairs, 109th Cong., 2nd sess. (2006).

<sup>3</sup> Christopher Bellavita, “What Is Preventing Homeland Security?,” *Homeland Security Affairs* I, no. 1 (Summer 2005): Abstract, <http://www.hsaj.org/?article=1.1.3>.

<sup>4</sup> John Foss Morton, *Next-generation Homeland Security: Network Federalism and the Course to National Preparedness* (Annapolis, MD: Naval Institute Press, 2012), 1.

coupled with new ways of networking and communication, are changing the paradigm from a one-to-many approach to a bottom-up, many-to-many and peer-to-peer approach.

Appreciative inquiry (AI) would allow the Department of Homeland Security (DHS) to establish a cooperative, co-evolutionary search for the best in people, their organizations, and the world around them. The DHS under an AI framework would seek to do a systematic discovery of what gives life to its organization and agency communities,<sup>5</sup> and provide an alternative to problem-focused inquiry methodologies. By intentionally guiding the socially constructive potential of human systems in the direction of their most noble and valued aspirations for the future, the DHS can generate ever-expanding new alternatives for organizing and elevating the human spirit within its agencies and the communities it serves.<sup>6</sup>

A forward-looking, appreciative homeland security system that helps people in communities be more sustainable is instrumental. Instead of individuals and communities bouncing back, a forward-looking homeland security helps communities before disasters by building on their strengths so they can flex and adapt more readily to any challenges that come their way. Communities will take ownership of plans and practices that really include them. As a concept, “homeland security,” begins with the word, “home,” the place where one belongs.

### **C. LITERATURE REVIEW**

The literature review explores the way homeland security has constructed its language, structured its programs and people, and looks at how the several component agencies are interacting. It also provides research on the changing security landscape that relates to people, communication, and networks.

The literature review is structured along three broad headings: people in community, people in communication, and people in interaction.

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<sup>5</sup> David L. Cooperrider and Diana Whitney, *Appreciative Inquiry: A Positive Revolution in Change* (San Francisco, CA: Berrett-Koehler, 2005), 224.

<sup>6</sup> James D. Ludema, “From Deficit Discourse to Vocabularies of Hope: The Power of Appreciation,” Stipes, 2001, <http://www.stipes.com/aichap29.html>.



## 1. People in Community

Early in the DHS's history, a series of publications related to homeland security and emergency management were created to act as guides or frameworks, mostly between federal agencies. The first document that was released after the formation of the DHS in 2002 was the *National Strategy for Homeland Security* under President Bush.<sup>7</sup> This strategy was the nation's first coordinated strategy to address protection of the homeland from a terrorist threat. Also, the first-ever *Quadrennial Homeland Security Review* (QHSR) was published in February 2010, which outlined the strategic framework to guide the activities of participants in homeland security toward a common end and constructed homeland security in terms of an "enterprise."

As an attempt to provide structure to the vast national preparedness enterprise under the DHS, the federal government created a *National Preparedness Goal* to develop a "secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk."<sup>8</sup> The *National Preparedness Goal* resulted from the *Presidential Policy Directive* (PPD) 8 in March 2011. In an effort to structure its work, five preparedness frameworks were created, each with a preparedness mission.<sup>9</sup> The frameworks sought to address the roles of individuals, non-profit entities, and non-governmental organizations (NGOs), the private sector, communities, critical infrastructure, governments, and the nation as a whole.<sup>10</sup> All five-mission areas sought to integrate with each other through interdependencies, shared assets, and overlapping objectives.<sup>11</sup> Other initiatives were created to foster community, such as the Federal Emergency Management Association (FEMA) *Whole Community Approach to*

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<sup>7</sup> George W. Bush, *The National Strategy for Homeland Security* (Washington, DC: Office of Homeland Security, 2002).

<sup>8</sup> Federal Emergency Management Agency (FEMA), *The National Preparedness Goal* (Washington, DC: Department of Homeland Security, 2011).

<sup>9</sup> Federal Emergency Management Agency (FEMA), *Overview of the National Planning Frameworks* (Washington, DC: Department of Homeland Security, 2013).

<sup>10</sup> Ibid., 1.

<sup>11</sup> Ibid., 2.

*Emergency Management*,<sup>12</sup> and the Department of Justice's *Building Communities of Trust Initiative*.<sup>13</sup>

The literature reveals that the homeland security landscape of the future will be vastly different than the one in which this nation operates now, in part, due to the changing demographics of the United States (U.S.). The most recent U.S. Census in 2010 revealed two demographic shifts. One is that the world's population is growing older and larger, and the other is that the younger population is smaller with fewer options for employment and participation. Both have homeland security implications.

The study of demographics is important because it has a direct impact on the resilience of this nation and other nations.<sup>14</sup> A review of the 2010 Census points to an America that is increasingly aging and more diverse. Between 2010 and 2050, the U.S. population is projected to grow from 310 million to 439 million, which is an increase of 42 percent. The nation will also become more racially and ethnically diverse, with the aggregate minority population projected to become the majority in 2042. The population is also expected to become much older, with nearly one in five U.S. residents aged 65 and older in 2030.<sup>15</sup> One demographic change often overlooked that directly affects homeland security is the large numbers of retirement-eligible employees in the years ahead, which could create mission critical skills gaps if left unaddressed.<sup>16</sup>

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<sup>12</sup> Federal Emergency Management Agency (FEMA), *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action* (Washington, DC: Department of Homeland Security, 2011), [http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole\\_community\\_dec2011\\_\\_2\\_.pdf](http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole_community_dec2011__2_.pdf).

<sup>13</sup> Robert Wasserman, *Building Communities of Trust* (Washington, DC: U.S. Department of Justice, Office of Community Oriented Policing Services, July 2010, [http://www.cops.usdoj.gov/files/RIC/Publications/e071021293\\_buildingcommtrust\\_revision.pdf](http://www.cops.usdoj.gov/files/RIC/Publications/e071021293_buildingcommtrust_revision.pdf)).

<sup>14</sup> Peter Drucker, "The New Demographics: How to Live with an Ageing Population." *The Economist*, November 1, 2001, <http://www.economist.com/node/770839>.

<sup>15</sup> Grayson K. Vincent and Victoria A. Velkoff, "The Next Four Decades: The Older Population in the U.S. 2010–2050: Population Estimates and Projections," U.S. Census, May 2010, <http://www.census.gov/prod/2010pubs/p25-1138.pdf>.

<sup>16</sup> Government Accountability Office, *Federal Workforce: Recent Trends in Federal Civilian Employment and Compensation* (GAO-14-215) (Washington, DC: U.S. Government Accountability Office, 2014), <http://www.gao.gov/assets/670/660449.pdf>.

Census demographics show that as a people, in addition to growing older, the nation is more unequal, more diverse, more mixed race, more digitally linked, more tolerant, less married, less fertile, less religious, less mobile, and less confident.<sup>17</sup> Other powerful drivers of change, such as globalization, technological development, decentralized and leaderless terrorists networks, and the shifting roles of individuals in society, have real potential to reshape the context within which this nation will operate. Therefore, community engagement by people closest to the issues and problems represents a more effective and promising way forward for homeland security.

To understand social networks, Berger and Luckmann explore how language and interactions with individuals and communities in this country create a shared reality. Understanding how the social construction of reality is created provides insight into the future narrative of community engagement at the local level. For this thesis, a social constructionist view of how people communicate and act in the community is important to utilizing its unique strengths and leadership potential. The idea is that the community that socially constructs its own preparedness, response, mitigation, and recovery is more likely to execute their plan instead of an outside entity telling them how to do it.

In their groundbreaking research, Cooperrider and Barrett examine the similarities of social construction and AI as it relates to organizations. Organizations are the products of human interactions and seemingly immutable ideas about people. In addition, according to the social constructionist viewpoint, the possibilities are infinite.<sup>18</sup> If resiliency is thoughtfully constructed through the language, knowledge, and action of any given community, then it can be concluded that the creation of textured vocabularies of hope and resiliency may well be the most powerful tool in a community's toolbox.<sup>19</sup>

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<sup>17</sup> Paul Taylor, *The Next America: Boomers, Millennials, and the Looming Generational Showdown Public Affairs* (Washington, DC: Pew Research Center, 2014), Kindle edition C, 157–159.

<sup>18</sup> David L. Cooperrider, "Positive Image, Positive Action: The Affirmative Basis of Organizing," *Stipes.com*, September 20, 2001, 133, <http://www.stipes.com/aichap2.htm>.

<sup>19</sup> Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality; a Treatise in the Sociology of Knowledge* (Garden City, NY: Doubleday, 1966).

Similarly, an AI framework is highlighted as an approach to social and organizational inquiry that fulfills these purposes.<sup>20</sup> The literature concludes that first, a direct and simultaneous link exist between this nation's vocabularies of organizing and the ways in which it organizes, and second, its vocabularies are products of the questions asked. AI distinguishes itself by posing positive questions that direct attention to the vital life-giving forces that nourish the best and most valued modes of organizing.<sup>21</sup> It seeks to look at communities by their assets and strengths instead of needs and deficits.

Asset mapping is a tool pioneered by Kretzman and McKnight, who argue that all people and all communities are gifted, resourceful, and capable; even those most marginalized and disadvantaged by social and economic change.<sup>22</sup> Kretzman and McKnight identify two different paths for supporting communities. The first path focuses on the community's needs, deficiencies, and problems. The second path is quite different in that it begins with a clear commitment to discovering a community's capacities, strengths, and assets. The authors contend that a resilient and strong community is one that is good at identifying its community members and systems considered assets. Once assets are identified, they are used to mobilize collective action.

Building on the work of Kretzman and McKnight, recent literature of Block also emphasizes that communities are built from the assets and gifts of their citizens, and not from the citizens' needs or deficiencies.<sup>23</sup> All authors argue that sustainable transformation is socially constructed in places at which citizens choose to come together to communicate and act collectively to produce a desired future.<sup>24</sup> In this context, design thinking can be very valuable. Design thinking is a human-centered approach that taps

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<sup>20</sup> Ludema, "From Deficit Discourse to Vocabularies of Hope: The Power of Appreciation."

<sup>21</sup> John Kretzmann and John McKnight, *Building Communities from the Inside Out: A Path toward Finding and Mobilizing a Community's Assets* (Evanston, IL: The Asset-Based Community Development Institute, Northwestern University, 1993).

<sup>22</sup> John McKnight and Peter Block, *The Abundant Community: Awakening the Power of Families and Neighborhoods* (Chicago, IL: American Planning Association, 2010).

<sup>23</sup> Peter Block, *Community: The Structure of Belonging* (San Francisco, CA: Berrett-Koehler Publishers, 2009), Kindle edition, 14.

<sup>24</sup> Tim Brown and Barry Kätz, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (New York: Harper Business, 2009), 4.

into capacities everyone possesses but are overlooked by more conventional problem-solving practices.<sup>25</sup> In the development of a community asset map, utilizing design thinking allows the community to be intuitive, recognize patterns, and construct new ideas. Through the mapping process, bridges of insight are built through empathy, the effort to see the world through the eyes of others, and common solutions are found.<sup>26</sup>

## **2. People in Communication**

The changing ways people communicate is a prominent theme in the literature review. Boase et al. recognize that smart devices have transformed communication from organization-to-person to person-to-person, which has dramatically changed the way people use information to interact with their world.<sup>27</sup> As Putnam has shown, households are much less likely today than they were a generation ago to have family dinners or picnics. Nevertheless, this observation does not mean they are disconnected. Rather, they are connected—as individuals—to friends and relatives, and even to other household members, if not always in conventional, face-to-face ways.<sup>28</sup>

Along similar lines, the Internet, smart devices, and technology play a socially beneficial role in a world moving toward interconnectedness. Boase et al. take a closer look at email as a tool of “glocalization, or “global local,” which means it connects distant friends and relatives, yet it also connects those who live nearby.<sup>29</sup> Ample evidence is available that social media and smart devices are fostering an environment in which people inhabit socially and spatially dispersed networks through which they maneuver to be sociable, to seek information, and to give and get help. Wellman has shown how this shift from solitary communities to social networks began before the Internet, is changing rapidly, and opening up new opportunities for connection and

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<sup>25</sup> Brown and Kätz, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*, 4.

<sup>26</sup> Jeffrey Boase et al., *The Strength of Internet Ties* (Washington, DC: American Life Project: Pew Research Center, January 25, 2006).

<sup>27</sup> Ibid.

<sup>28</sup> Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster, 2000).

<sup>29</sup> Boase et al., *The Strength of Internet Ties*.

collaboration.<sup>30</sup> Additionally, a closer look at social media indicates that this nation's language and vocabulary is changing based on the new ways of communication.

The relevance to homeland security is that communication to the public that is understandable, plain, easy to read, welcoming and inclusive fosters participation and trust in government. The literature review explored the Plain Language Act of 2010. Social construction of a future homeland security narrative using plain language<sup>31</sup> is paramount for building trust and cooperation with the community. In addition, building trust is paramount to the success of all the best-laid plans of the homeland security enterprise, and thus, to the national security.

### **3. People in Interaction**

Ordinary Americans cross paths with networks on a daily basis: road networks, cell tower networks, health networks, food networks, water and sewer networks, electrical networks, social networks, educational networks and on and on. Boase et al. emphasize the strength of Internet ties to help gather information for important decision making.<sup>32</sup>

New research related to social network analysis reveals that individuals use technology to communicate but specific network analysis is limited in its use for building community asset mapping. The value of social network theory versus other political science and sociological approaches is its focus on the value of the network structure rather than the characteristics of the individual. While social network analysis leaves room for individuals to affect their fate, it argues that the structure of the network and relationships and ties with others in the network is extremely important.<sup>33</sup>

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<sup>30</sup> Harrison Rainie and Barry Wellman, *Networked: The New Social Operating System* (Cambridge, MA: MIT Press, 2012).

<sup>31</sup> Joanne Locke, "A History of Plain Language in the United States Government," Plain Language.gov, accessed March 28, 2014, <http://www.plainlanguage.gov/whatisPL/index.cfm>.

<sup>32</sup> Boase et al., *The Strength of Internet Ties*.

<sup>33</sup> Steve Ressler, "Social Network Analysis As an Approach to Combat Terrorism: Past, Present and Future Research," *Homeland Security Affairs* II, no. 2 (July 2, 2006), <http://www.hsaj.org/?fullarticle=2.2.8>.

In every community, some individuals, despite all odds, manage to negotiate disaster in a resilient way. These individuals are said to be positive deviants in the community because their survival behavior is outside of the community norm of response.<sup>34</sup> Examining, understanding, and mapping of not only individuals who are resilient but also the community strengths is crucial.

The seminal work related to positive deviance by Pascale, and Sternin discusses in detail how unlikely community innovators have solved some of the toughest problems.<sup>35</sup> Other research points to the importance of community catalysts in the work of Diamandis, who emphasizes the potential use of positive deviance to help communities.<sup>36</sup> Cognitive surplus is a type of positive deviance and appreciative inquiry.<sup>37</sup> Today, people have new freedom to act in concert and in public.<sup>38</sup>

One thing that makes the current age remarkable is that it is now possible to treat free time as a general social asset that can be harnessed for large, communally created projects, rather than as a set of individual minutes to be whiled away one person at a time.<sup>39</sup> Understanding the community as a social construct, changeable and responsive is important. This systems approach functions better in an uncertain environment because it encourages robustness and adaptability rather than optimality.<sup>40</sup> Change and evolution in such systems emerge as interacting agents engage in simple behaviors, an ecosystem. An

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<sup>34</sup> Richard T. Pascale, Jerry Sternin, and Monique Sternin, *The Power of Positive Deviance: How Unlikely Innovators Solve the World's Toughest Problems* (Boston, MA: Harvard Business Press, 2010), Kindle edition.

<sup>35</sup> Peter H. Diamandis and Steven Kotler, *Abundance: The Future Is Better than You Think* (New York: Free Press, 2012).

<sup>36</sup> Clayton M. Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* (Boston, MA: Harvard Business School Press, 1997).

<sup>37</sup> Clay Shirky, *Cognitive Surplus: Creativity and Generosity in a Connected Age* (New York: Penguin Group US, 2010), Kindle edition, 171.

<sup>38</sup> Ibid., 10.

<sup>39</sup> Marina Alberti, "Planning Under Uncertainty: Regime Shifts, Resilience, and Innovation in Urban Ecosystems," *The Nature of Cities*, January 22, 2013, <http://www.thenatureofcities.com/2013/01/22/planning-under-uncertainty-regime-shifts-resilience-and-innovation-in-urban-ecosystems/>.

<sup>40</sup> Marina Alberti, *Advances in Urban Ecology: Integrating Humans and Ecological Processes in Urban Ecosystems* (New York: Springer, 2008).

uncertain and unpredictable environment, often caught by surprise, is usually driven by complex issues, almost always based in social issues.<sup>41</sup>

#### **D. HYPOTHESIS: COMMUNITY AND ENGAGEMENT AS CONCEPTS**

The nation got a new look at its demographics in the 2010 Census, which provides an updated picture of who is interacting in the nation's homeland security space. As this nation's demographics are changing, so too are the technological advancements in social media and social network applications for collaboration like the nation has never seen before. This new "sharing" environment, an appreciative space offers numerous opportunities for ordinary Americans to interact in the homeland security enterprise.

##### **1. Probable Advantages**

The approach offers the following probable advantages:

- The community has input into what happens in it
- Community mapping defines the people, location, connectors, and power relationships of the community
- Engagement may have positive effects on emergency planning efforts
- Identification of critical nodes of leadership that exert vital leadership within the community
- Change is more apt to occur when the individuals it affects are involved in designing and creating it
- Participation in community leads to strong relationships and a communal leadership fabric
- People who interact with the neighbors are more likely to know about community resources
- A strong sense of community may foster a sense of belonging to a greater whole of community, which may then motivate individuals to act to improve the community in times of crisis.

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<sup>41</sup> David M. Chavis and Abraham Wandersman, "Sense of Community in the Urban Environment: A Catalyst for Participation and Community Development, *American Journal of Community Psychology* 18, no. 1 (1990): 55–81.



- When people share a strong sense of community, they are empowered to change the problems they face and are better able to mediate the negative effects over things they cannot control.<sup>42</sup>
- Community engagement can act as a catalyst for change
- Communication and engagement of everyone in a community can help create a common understanding of a perceived threat or problem
- When everyone works together on a mutual plan, it decreases duplication of efforts on similar projects
- Community engagement is an opportunity to lay out the cost-benefit analysis of working together toward common goals
- Engagement of community leaders related to emergency management and homeland security provides networking opportunities that may extend to other community problems.

## **2. Potential Disadvantages**

The community engagement model is not without its perils, however. Some of the potential pitfalls of involving the community more actively in its own security planning and execution include the following.

- Possible failure to integrate the community into long-range planning efforts
- Perceived multiple definitions of community leads to common misunderstandings of who is included in it
- By mapping the community, some may be left out due to organizational or individual prejudices about the community demographics
- Community leaders may not buy into long-range planning efforts
- Community leaders may resist any outside ability to control resources, programs, or services
- Leaders in the community may want to hold onto power and influence over the community

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<sup>42</sup> Stephens B. Fawcett et al., “Promoting Health through Community Development,” in *Promoting Health and Mental Health in Children, Youth and Families*, ed. David S. Glenwick and Leonard A. Jason (New York: Springer Publishing Company; 1993).

- The community may not understand the dynamics of an identified or perceived problem or threat
- The community may not have the resources, knowledge, or skills to address a particular problem.<sup>43</sup>
- Community leaders can become caught up in “selling” an engagement effort without an accurate assessment of the resources needed to support its implementation<sup>44</sup>
- Factions may form in coalitions that are forums for multi-purpose and long-term alliances<sup>45</sup>
- Community leaders decide that the outlay of time and energy outweighs the benefits of community engagement
- An unsuccessful community engagement endeavor may lead to attitudinal barriers to other community projects
- All members of community leadership may not be at the same level of readiness for change or community innovation

Community building is about building relationships among people, which process is full of social complexity. The central question of the sciences of complexity is how this emergent self-organized behavior comes about.<sup>46</sup> Communities are complex systems with the ability to organize without the benefit of an outside entity. They can evolve and learn, like in an ecosystem. The word complex comes from the Latin root *plectere*, to weave or entwine, and in this language context, people weave relationships and social connections that intertwine to form a whole of system called community.<sup>47</sup>

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<sup>43</sup> Paul Florin and Abraham Wandersman, “An Introduction to Citizen Participation, Voluntary Organizations, and Community Development: Insights for Empowerment Through Research,” *American Journal of Community Psychology* 18, no. 1 (1990): 41–55.

<sup>44</sup> France Dunn Butterfoss, Robert M. Goodman, and Abraham Wandersman, “Community Coalitions for Prevention and Health Promotion,” *Health Education Research* 8, no. 3: (1993): 315–330.

<sup>45</sup> Lawrence W. Green and Shawna L. Mercer, “Can Public Health Researchers and Agencies Reconcile the Push from Funding Bodies and Pull from Communities?” *American Journal of Public Health and the Nation’s Health* 91, no. 12 (December 2001): 1926–943, doi:10.2105/AJPH.35.12.1319.

<sup>46</sup> Melanie Mitchell, *Complexity: A Guided Tour* (Oxford: Oxford University Press, 2009), Kindle edition, 324–326.

<sup>47</sup> Mitchell, *Complexity: A Guided Tour*, 198–201.

Navigating community relationships before and after a disaster, either manmade or natural, requires great social skill in that multiple definitions of community exist that lead to a general understanding of who is included in it. A common definition of community is a group of people with diverse characteristics linked by social ties, share common perspectives, and engage in joint action.<sup>48</sup> It is within the community that members bounce back from adversity aided by social networks, friends, family, religious and community organizations, satisfying jobs, and access to support and resources.<sup>49</sup>

However, in navigating the community, its social complexity leads some perhaps to feel left out due to organizational or individual prejudices about the community demographics or leaders within the community who want to hold onto power and influence over the wishes of the community as a whole. Additionally, the community may not have the resources, knowledge, or skills to address a particular problem.<sup>50</sup> However, if community leaders rush in too quickly, they can become caught up in “selling” an engagement effort without an accurate assessment of the community resources needed to support its implementation.<sup>51</sup> This careful negotiation of power and influence in the community may lead to coalition or factions supporting one way or the other, which then can lead to long-term alliances.<sup>52</sup> Leadership in the community must understand that an unsuccessful community engagement endeavor could lead to barriers to other future engagements. Ultimately, not all members of community leadership may be at the same level of readiness for change or community innovation. In conclusion, community collaboration will require a long-term commitment to engagement with its local partners. It is wise for those in government to be intimately aware of the community’s values, diversity, demographics, and engagement experiences. Engagement occurs by looking at the community’s assets, and flexibility is required to flex to the

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<sup>48</sup> Andrew Zolli and Ann Marie Healy, *Resilience: Why Things Bounce Back* (New York: Free Press, 2012), Kindle edition, 129.

<sup>49</sup> Florin and Wandersman, “An Introduction to Citizen Participation, Voluntary Organizations, and Community Development: Insights for Empowerment Through Research.”

<sup>50</sup> Ibid., 41–55.

<sup>51</sup> Butterfoss, Goodman, and Wandersman, “Community Coalitions for Prevention and Health Promotion,” 315–330.

<sup>52</sup> Cooperrider and Whitney, *Appreciative Inquiry: A Positive Revolution in Change*, 224–226.

changing needs. Communities are not perfect but their inclusion for their own protection and resiliency must be at the heart of any effort and central to any successful collaboration.

## **E. RESEARCH DESIGN**

The thesis includes qualitative, descriptive, and prescriptive research strategies, including an AI focus. Case studies appear throughout the thesis to provide relevance to the research findings.

Qualitative research aims to gather an in-depth understanding of human behavior and the reasons that govern behavior. It seeks to understand why people do what they do and say what they say. The qualitative approach is oriented toward discovery and a holistic understanding of the various processes and dynamics of community building, engagement, and participation. In short, qualitative research tells a story in the context of the culture in which the story occurs.

Descriptive and prescriptive research models help investigate and map the existing resources, processes, and problems related to strengths-based engagement and then prescribe solutions in the form of recommendations for any shortcoming found in the qualitative research and case studies. A descriptive approach is important in understanding complex human phenomenology and its emergent nature, especially diverse community systems. Due to this inherent nature of emergence, a social constructionist view is utilized in understanding the diversity of human communities, their similarities, and differences.

## **F. RESEARCH MODELS**

The thesis research begins with a social psychology perspective to include a social constructionist view of community and an AI holistic view. AI is the cooperative, co-evolutionary search for the best in people, their organizations, and the world around them. It involves systematic discovery of what gives life to an organization or a

community when it is most effective and most capable in economic, ecological, and human terms.<sup>53</sup>

The AI model deduces from looking at past or current efforts in the context of the “best of what is,” and envisions “what could be,” by moving from general discovery of information to specific actions. In this context, the examination is prescriptive in that the researcher hopes to prescribe recommendations that help to design “what should be,” and “what will be,” if the recommendations are implemented.

As with many issues related to human systems, case studies lend themselves to looking at multiple dynamics and human networks because they can provide insight into common interactions among individuals and groups.

Through the case study methodology, the study results can assist organizational leadership within the community to “create an alignment of strengths in ways that make a system’s weaknesses irrelevant.”<sup>54</sup> Case studies for community mapping, examination of positive deviance, and social network analysis are examined. Case studies in these AI frameworks suggest the idea that collective strengths do more than perform—they transform.<sup>55</sup>

## **G. THESIS OVERVIEW**

The first chapter of this thesis contains the problem statement, hypothesis, research models, as well as literature that reviewed the benefits of a people-centric, strengths-based AI framework for community engagement, within the homeland security enterprise and communities at large. Chapter II provides a historic backdrop for the thesis and then explores current and future human demographics at play in the homeland security realm. Chapter III explores new technology tools, the psychology, and sociology of human interactions, and makes vital connections of these dynamics to the homeland security ecosystem. Chapter IV discusses the social construction of communication and

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<sup>53</sup> Cooperrider and Whitney, *Appreciative Inquiry: A Positive Revolution in Change*, 142–143.

<sup>54</sup> Quote from Peter Drucker in Cooperrider and Whitney, *Appreciative Inquiry: A Positive Revolution in Change*, 135–136.

<sup>55</sup> Cooperrider and Whitney, *Appreciative Inquiry: A Positive Revolution in Change*, 142–143.

group formation through networks. Chapter V provides the conclusions and further reflections, based on this research.

## II. WE, THE PEOPLE

A government must be strong, but its strength must be a moral strength that encourages people voluntarily to coordinate their actions for the common good, as opposed to a coercive strength that attempts to control or force people into doing something.<sup>56</sup> The current homeland security enterprise is a complex-adaptive system but functions as a closed and linear system. A complex adaptive system is formally defined as a system of independent agents that can act in parallel, develop “models” as to how things work in their environment, and, most importantly, refine those models through learning and adaptation.<sup>57</sup> In relationship to the homeland security enterprise, it is *complex* because it is a diverse dynamic network of interconnected interactions and agencies and it is *adaptive* in that individual and collective behavior can change and “self-organize” based on a micro-event or a collection of events.<sup>58</sup> In this context, the homeland security enterprise has evolved into a homeland security ecosystem.

A large number of interconnected parts that provide challenge and opportunity characterizes this complex adaptive system. Traditional organizations, traditional forms of control, and planning are minimally effective for complex threats. The world of today is becoming increasingly complex. Unfortunately, people’s style of thinking rarely matches this complexity.

A movement toward a more open system to match the world’s complexity is needed. It is not that open systems necessarily make better decisions but that an open system is able to respond more quickly to threats because each member has access to knowledge and the ability to make direct use of it. This feature is an important part of an open decentralized system; the intelligence is spread throughout the system and naturally

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<sup>56</sup> Murray Gell-Mann, *The Quark and the Jaguar* (New York: Freeman, 1994), 16–24; also, Waldrop, *supra* note 2, 294–299.

<sup>57</sup> Amit Gupta and S. Anish, “Insights from Complexity Theory: Understanding Organizations Better,” *Tejas@iimb*, accessed April 30, 2014, <http://tejas.iimb.ac.in/articles/12.php?print=true>.

<sup>58</sup> Ori Brafmana and Rod A. Beckstrom, *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations* (New York: Penguin Group US, 2006), Kindle edition, 40.

filters to the edges of the system.<sup>59</sup> However, the most important aspect of an open system is that when people are put into an open system and they will automatically want to contribute.<sup>60</sup> This development essentially is a paradigm shift from a historically closed homeland security system to an open adaptive system.

## **A. THE NATION'S HISTORY OF RESILIENCY**

From the nation's inception, we, the people, have played a vital role in securing their communities within the homeland. For example, in 1608, Jamestown recorded its first fire.<sup>61</sup> At that time, fire buckets in colonial towns had the names of owners painted on them and residents were required by law to purchase them and keep them in good repair.<sup>62</sup> Citizens were expected by the rest of community to contribute to the larger effort and to participate actively, day or night, in putting out fires and securing the township.

### **1. Disaster Relief and Recovery**

The first disaster relief volunteer organizations came to prominence in 1881 after the Johnstown, Pennsylvania flood that killed 2,200 people.<sup>63</sup> Business people were moving their wares to the upper stories of their buildings. Families moved furnishings and supplies they would need to wait out the deluge.<sup>64</sup> Some continued to wait out the disaster in their houses; others were picked up by the flood wave for a wild ride through the town to the Pennsylvania Railroad Company's Stone Bridge, where debris piled 40 feet high and over 30 acres, then caught fire. Still others were shot down the Conemaugh

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<sup>59</sup> Brafmana and Beckstrom, *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations* 74.

<sup>60</sup> Ibid., 40.

<sup>61</sup> Robert Mood and Dennis Smith, "History of Fire Fighting," A Fire Pro, accessed April 16, 2014, <http://www.afirepro.com/history.html>.

<sup>62</sup> Mark Sauter and James Jay Carafano, *Homeland Security: A Complete Guide* (New York: McGraw-Hill, 2012), 11.

<sup>63</sup> "History of the Johnstown Flood," accessed November 9, 2014, <http://www.jaha.org/FloodMuseum/history.html>.

<sup>64</sup> Ibid.



River to die or be rescued at Nineveh, Bolivar, or other communities downstream.<sup>65</sup> As the floodwaters receded, and the extent of the devastation was revealed, it became very clear a more coordinated community effort was needed for the future.

Chartered by Congress in 1900, the Red Cross, along with other civic and faith-based volunteer groups, gradually took over the responsibilities for relief and rehabilitation from the U.S. Army, which reinforced the principle that even when compelled to intervene, military assistance was meant to temporary help until tasks could be turned over to civilian authorities.<sup>66</sup> At that time, the federal government did not play a large role in civil preparedness or responding to disasters. In fact, the earliest case of congressionally approved domestic assistance followed a devastating fire in Portsmouth, New Hampshire in 1803.<sup>67</sup> The first glimpse of drifting away from local civic engagement came in the early 1800s, after disagreements among community groups and labor became more prominent, and the federal government began to take a more active role.

The emergence of a federal role in disasters in American history began with domestic terrorism with the Ku Klux Klan and labor disputes during the presidency of William McKinley.<sup>68</sup> As a reflection of the ongoing national debate between security and government power, this measure precipitated calls for the passage of the Posse Comitatus Act of 1878, which prohibited federal troops from enforcing state or federal laws without congressional approval.<sup>69</sup>

The federal role continued not just in disputes but also in helping with natural disasters, such as the Spanish Flu pandemic of 1918. During the 1920s, researchers estimated that global mortality from the pandemic flu of 1918 was between 30 million

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<sup>65</sup> “History of the Johnstown Flood.”

<sup>66</sup> Sauter and Carafano, *Homeland Security: A Complete Guide*, 11.

<sup>67</sup> *Ibid.*, 6.

<sup>68</sup> *Ibid.*, 8.

<sup>69</sup> Mathew Carlton Hammond, “The Posse Comitatus Act: A Principle in Need of Renewal,” *Washington University Law Quarterly*, Summer 1997, 3, <http://www.wulaw.wuslt.edu/75-2/75-2-10.html>.

and 50 million, with an estimated 675,000 Americans among the dead.<sup>70</sup> However, in the United States, major urban communities began to ignore official instruction on how to respond and adopted their own response to quell the outbreak.<sup>71</sup> The national response to the pandemic holds many lessons for the practice of homeland security. The United States had episodically experienced epidemics in its history but never a pandemic, during which lethal widespread disease quickly spanned the country. Traditionally, all levels of government played a very limited role in health matters. New York City established the first public health agency in 1866, and other cities followed its example. States began to establish health boards around the turn of the 20th century. Federal activities were limited to the military services and the Marine Hospital Service, a collection of public hospitals that provided care to merchant seamen. It was not until 1912 that Congress converted the Marine Hospital Service to the Public Health Service, under the surgeon general.<sup>72</sup>

Throughout much of the Cold War, the U.S. government's formal efforts in disaster response centered on civil defense, the protection of the U.S. population against Soviet military attack. Perhaps the most memorable of these efforts was the 1950s educational film, "Duck and Cover," which featured advice from Bert the Turtle, the animated spokes-creature who advised parents and children on what to do in the event of a nuclear detonation.<sup>73</sup> Civil defense posited an uneasy and largely undefined relationship between everyday citizens preparing themselves for calamity and the federal government, which was presumed to be involved in the response to emergencies of the magnitude of a nuclear strike. Ultimately, the momentum of civil defense, including the 1950 and 1969 Disaster Relief Acts, contributed to the creation of the Federal Emergency Management Agency (FEMA) in 1979.<sup>74</sup> Although the agency is associated with the presidency of Jimmy Carter, FEMA in fact formed up in time for a change in the White

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<sup>70</sup> "The Great Pandemic: The United States in 1918–1919," accessed April 16, 2014, [http://www.flu.gov/pandemic/history/1918/the\\_pandemic/index.html](http://www.flu.gov/pandemic/history/1918/the_pandemic/index.html).

<sup>71</sup> Sauter and Carafano, *Homeland Security: A Complete Guide*, 16.

<sup>72</sup> Ibid.

<sup>73</sup> Ibid., 26.

<sup>74</sup> DHS Office of Inspector General, "FEMA: In or Out?" Homeland Security Digital Library (February 2009): 3, <https://www.hsdl.org/?view&did=229723>.

House. President Reagan, a strong opponent of a large federal government, averaged only 28 disaster declarations per year. He reversed, for a time, the trend of greater federal control over disasters.<sup>75</sup> This ideologically based reticence left a void and might have led to ambiguity of who should respond to disasters, natural, or manmade.

## **2. National and Homeland Security**

A lack of citizen and governmental preparedness can backfire on the most cherished values. The checks and balances so skillfully incorporated into the U.S. constitutional framework are weakest in times of crisis, and it is not guaranteed that the government will do the right thing in a crisis. Indeed, historically, this nation's liberties have been most vulnerable during and immediately following a national trauma.<sup>76</sup> For example, in World War II, an unprecedented decision placed 120,000 citizens and resident aliens of Japanese descent into detention camps in the Rocky Mountain region after the bombing of Pearl Harbor. Regrettably, U.S. citizens of Japanese descent were forced to leave their homes and most of their belongings to live in remote camps until January 1945.<sup>77</sup>

Only in 1947 did the nation attempt to organize around a national security strategy under President Truman who signed the National Security Act into law. It mandated a major reorganization of the foreign policy and military establishments of the U.S. government.<sup>78</sup> To be sure, from 1947 to September 11, 2001, national security was primarily a federal, interagency mission function with very little outside or citizen input. The 1947 national security system was built and continues to build on federal-centric governance mechanisms that have been ever expanding since the Progressive era before

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<sup>75</sup> Sauter and Carafano, *Homeland Security: A Complete Guide*, 27–28.

<sup>76</sup> Stephen Flynn, *America the Vulnerable: Struggling to Secure the Homeland* (New York: Harper Collins, 2004), Kindle edition, 2159.

<sup>77</sup> *Ibid.*, 2162.

<sup>78</sup> “National Security Act of 1947,” accessed April 23, 2014, <https://history.state.gov/milestones/1945-1952/national-security-act>.

World War I. As such, they reflect industrial-age governance geared to industrial-age threats and opportunities with a top-down focus.<sup>79</sup>

It appears that despite the waxing and waning of involvement of the government during times of crisis, the people remain at the nation's heart. After the Geneva Summit in July 1955, when representatives of the United States, the Soviet Union, Britain, and France met to discuss global security,<sup>80</sup> a secret panel of 12 men appointed by Nelson Rockefeller, then Special Assistant to the White House, met in November 1955 to discuss the psychological aspects of an American strategy.<sup>81</sup> The first agenda item of four was "explain to the people of the United States the gravity of the world situation and spell out what is required to overcome it."<sup>82</sup> Later in the report—only made public in 2008 under the heading, "Obtaining the Support of the American People," it is noted,

In our democratic system, the ultimate boundary lines defining the dimensions of the possible are set by the American people. Necessary programs, and the reasons for instituting them are now more complicated than ever before. Hence, those men whose knowledge and judgment are widely respected bear the very sobering responsibility—more serious than at any time since the opening of World War II—of influencing the American people in what they should accept and support.<sup>83</sup>

The 1955 federal document is uncanny in its foreshadowing of the U.S. current security situation.

The federal government's inclusion of local government and its citizens as participants may have been sporadic throughout time but the desire and willingness of the American people to be active in their security has not waned. It is only necessary to look

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<sup>79</sup> Morton, *Next-generation Homeland Security: Network Federalism and the Course to National Preparedness*, 2.

<sup>80</sup> James Reston, "Big Four Conference Opens Today; West's Chiefs Complete Strategy on Germany, Disarming, Security," *New York Times*, July 18, 1955, 1.

<sup>81</sup> Panel Report, *Psychological Aspects of United States Strategy, Panel Report to Nelson A. Rockefeller, Special Assistant to the President, White House*, HR70-14 ed., Homeland Security Database, November 1, 1955.

<sup>82</sup> *Ibid.*, iii.

<sup>83</sup> *Ibid.*, 33.

to New York City on September 11, 2001 (9/11) to see that everyday citizens are up to the task of playing an active role in managing the threats that now confront this nation.

To make the point even sharper, on 9/11, the nation's security rested solely on the shoulders of ordinary American citizens aboard four planes. In those first critical hours after the World Trade Center towers came down, the federal government and its security machinery was nowhere in sight. Local officials and the people of New York responded heroically, in striking contrast to the heinous acts that had been visited upon them.<sup>84</sup> One story that makes this point is the historic groundswell of the boatlift efforts out of Manhattan on 9/11. A band of boats came together to rescue nearly 500,000 New Yorkers from the World Trade Center site on the day the towers collapsed. It was the largest boatlift ever to have happened, greater than the one at Dunkirk during World War II.<sup>85</sup> This one act makes the point clear that "our national DNA is resilience."<sup>86</sup>

Moreover, the concept of homeland security continues to evolve. Homeland security as a concept was precipitated by the terrorist attacks of 9/11. After 9/11, policymakers concluded that a new approach was needed to address the large-scale terrorist threats. A presidential council and department were established, and a series of presidential directives were issued in the name of "homeland security."<sup>87</sup> However, Washington still lacks a coherent strategy for harnessing the nation's best assets for managing risks to the homeland, civil society and the private sector.<sup>88</sup>

In general, a growing homeland security bureaucracy has largely overlooked the need to garner support from the public, yet when citizens understand the appropriateness of a given security measure, they are more than willing to collaborate to achieve its

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<sup>84</sup> Flynn, *America the Vulnerable: Struggling to Secure the Homeland*, 2131–2135.

<sup>85</sup> Katherine Herrup, "Boatlifters: The Untold Story of 9/11," *Reuters News Service*, September 9, 2011, <http://blogs.reuters.com/katharine-herrup/2011/09/09/boatlifters-the-unknown-story-of-911/>.

<sup>86</sup> Stephen Flynn, quote from Herrup, "Boatlifters: The Untold Story of 9/11."

<sup>87</sup> Shawn Reese, *Defining Homeland Security: Analysis and Congressional Considerations* (CRS Report No. R42462) (Washington, DC: Congressional Research Service, 2013), 2.

<sup>88</sup> Stephen Flynn, "Recalibrating Homeland Security: Mobilizing American Society to Prepare for Disaster," *Foreign Affairs*, May/June 2011, 130–40.

goal.<sup>89</sup> Resilience is a precious skill. People who have it tend to have three advantages: a belief that they can influence life's events, a tendency to find meaning and purpose during turmoil, and a strong conviction that it is possible to learn from positive and negative experiences.<sup>90</sup> Building societal resilience in the future will require a bottom-up, open, and participatory process by all Americans; in other words, the exact inverse of the way U.S. policymakers have approached homeland security to date.<sup>91</sup>

## **B. THE DEMOGRAPHICS OF “WE, THE PEOPLE”**

“We, the People” are the first three words of the preamble of the American Constitution.<sup>92</sup> In this thesis, the author puts forward that several drivers of change exist that are impacting U.S. citizens, including this nation's changing demographics. These factors include that America is growing older, becoming more diverse, more digitally linked, more tolerant, and less trusting of government entities. Understanding these nuances about the U.S. evolving demographics is key to proactively constructing homeland security opportunities and mitigating challenges. One of the powerful drivers of change that will impact the landscape in which homeland security will operate is this nation's changing population demographics. Population-related demographic changes are “aha” moments, dramas in slow motion that unfold incrementally, almost imperceptibly and as the weight of change builds, society notices that things are different. These “aha” moments are rare and revealing.<sup>93</sup>

### **1. We, the People, are Growing Older**

The United States is experiencing an aging demographic tsunami. In January 2011 the Baby Boomers—those born between 1946 and 1964—began turning 65 at a rate of

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<sup>89</sup> Flynn, “Recalibrating Homeland Security: Mobilizing American Society to Prepare for Disaster,” 132.

<sup>90</sup> Amanda Ripley, *The Unthinkable: Who Survives When Disaster Strikes—and Why* (New York: Crown Publishing Group, 2008), Kindle edition, 91.

<sup>91</sup> *Ibid.*, 137.

<sup>92</sup> “The Constitution of the United States: A Transcription,” accessed April 23, 2014, [http://www.archives.gov/exhibits/charters/constitution\\_transcript.html](http://www.archives.gov/exhibits/charters/constitution_transcript.html).

<sup>93</sup> Taylor, *The Next America: Boomers, Millennials, and the Looming Generational Showdown*.

10,000 per day and will continue to do so until the year 2030.<sup>94</sup> As a result, in 2050, the number of Americans aged 65 and older is projected to be 88.5 million, more than double the number in 2010.<sup>95</sup> Moreover, in 2060, the number of persons 65 and older will reach 92 million.<sup>96</sup> The ripple effects of the aging demographic will be felt throughout the fabric of American life and will challenge the homeland security enterprise. Growth in the elderly population creates both opportunities and challenges in a disaster environment.<sup>97</sup>

The implications for homeland security are that community planners and local governments will need to gain a better understanding of aging issues and plan for changes in family structures, communication, local infrastructure, transportation, health, and diverse linguistic needs during disasters. Unquestionably, these homeland security community challenges will continue throughout the next four to six decades. Considerations for the aging population will affect every facet of emergency management.

According to demographers, emergency managers and homeland security professionals will need to adjust their practices for an aging population that will be ethnically diverse and primarily female. As a result, many of the older population will require medical personnel and/or family members to accompany them as caregivers during evacuations. In preparation, evacuation vehicles and aircraft will need to include accessible features to evacuate the elderly properly and shelter managers will need to make adjustments in medical staff, equipment, and medication supplies to accommodate the ever-growing aging population. Increasingly, the older population is migrating to more urban cities and coastal states. As of 2003, 53 percent of the nation's population

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<sup>94</sup> "Baby Boomers Retire," December 29, 2010, <http://www.pewresearch.org/daily-number/baby-boomers-retire>.

<sup>95</sup> Vincent and Velkoff, "The Next Four Decades: The Older Population in the U.S. 2010-2050: Population Estimates and Projections."

<sup>96</sup> U.S. Census Bureau, *Number of Persons 65+, 1900-2060, Population Estimates and Projections* (Suitland, MD: U.S. Census Bureau, 2010).

<sup>97</sup> Federal Emergency Management Agency (FEMA), *Strategic Foresight Initiative, U.S. Demographic Shifts: Long-term Trends and Drivers and Their Implications for Emergency Management* (Washington, DC: Department of Homeland Security, 2011), 1.

lived in the 673 U.S. coastal counties, an increase of 33 million people since 1980.<sup>98</sup> In addition, more than 1.4 million people in the United States receive home healthcare.<sup>99</sup> To be able to assess the resources needed for the entire community when a disaster strikes, homeland security professionals must ensure that demographic trends are factored into their first responder emergency plans.

Along similar lines, an estimated 13 million individuals aged 50 or older in the United States will need evacuation assistance, and for about half of them, such assistance will be required from someone outside of their household.<sup>100</sup> In this connection, Hurricanes Katrina and Rita highlighted a fact that should already have been known, the poorest and neediest are especially vulnerable during times of crisis.<sup>101</sup> The adjustments to the emergency management life cycle due to the aging demographic will require long-range strategic thinking on a variety of important social and political trends. Importantly, winning the support of older people will become a political imperative in every developed country, as life expectancy of the aging population is longer. Homeland security planners will need to monitor over time and factor in these dynamics into long-range planning from now until 2060.

#### ***a. Aging and the Workforce***

As the population ages, so does the workforce, and this development hits home especially for the homeland security ecosystem. The high percentage of federal employees, largely from the Department of Defense (DOD) and the DHS, will lead to a brain drain and lack of continuity of information regarding U.S. security. From 2004 to 2012, the federal non-postal civilian workforce grew by 258,882 employees, from 1.88 million to 2.13 million, or 14 percent. Permanent career employees accounted for most of

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<sup>98</sup> Kristen M. Crossett et al., *NOAA's National Ocean Service: Population Trends Along the Coastal United States: 1980–2008*, September 4, 2004, [http://oceanservice.noaa.gov/programs/mb/supp\\_cstl\\_population.html](http://oceanservice.noaa.gov/programs/mb/supp_cstl_population.html).

<sup>99</sup> Brian Parsons and Debra Fulmer, “The Paradigm Shift for Planning for Special Needs Populations,” U.S. Department of Education, 1, 2007, [http://rem.ed.gov/docs/SpecialNeeds\\_ParadigmShiftInPlanning\\_2007.pdf](http://rem.ed.gov/docs/SpecialNeeds_ParadigmShiftInPlanning_2007.pdf).

<sup>100</sup> Ibid.

<sup>101</sup> Stephen Flynn, *The Edge of Disaster: Rebuilding a Resilient Nation* (New York: Random House, 2007), Kindle edition, 379.



the growth, increasing by 256,718 employees, from 1.7 million in 2004 to 1.96 million in 2012 or 15 percent. Three agencies—the DOD, DHS, and Veterans Affairs (VA)—accounted for about 94 percent of this increase. While the federal civilian workforce grew in size from 2004 to 2012, most of the growth was concentrated in these three federal agencies and was driven by the need to address some of the nation’s pressing priorities.<sup>102</sup>

A Government Accountability Office (GAO) report in February 2013 reported that by September 2017, nearly 600,000 employees or 31 percent of the federal workforce would be eligible to retire. This eligibility could be a tipping point—a moment of critical mass that could lead to DOD and Homeland DHS mission critical skills gaps.<sup>103</sup>

Additionally, the people replacing the aging homeland security workforce will most likely be “millennials” in the near-term, who range in age from 18 to 33. Millennials are relatively unattached to organized politics and religion, linked by social media, burdened by debt, distrustful of people, in no rush to marry, and optimistic about the future. They are also America’s most racially diverse generation.<sup>104</sup> Therefore, the future social construction of homeland security is likely to take on the same characteristics as the millennials as they replace the traditional homeland security workforce.

***b. Recommendations***

In light of these findings, the following recommendations emerge.

- Homeland security disaster response plans should develop strategies for an aging nation and consider issues that will arise in communication, transportation, evacuation, housing, and medical care.
- The DHS should concentrate on succession planning for a retiring workforce in the near future.

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<sup>102</sup> Government Accountability Office, *Federal Workforce: Recent Trends in Federal Civilian Employment and Compensation*, 2.

<sup>103</sup> Ibid.

<sup>104</sup> Paul Taylor et al., *Millennials in Adulthood, Detached from Institutions, Networked with Friends* (Washington, DC: Pew Research Center, 2014).

- The DHS should anticipate a younger, more diverse, more digitally savvy, and digitally connected workforce.

## 2. We, the People, are Becoming More Diverse

One of this nation's greatest strengths is that the American social fabric continues to weave together immigrants to the United States and people from all backgrounds and walks of life as part of an indivisible community.<sup>105</sup> As columnist Fred Barnes has written, "[W]e have a history of hating immigrants before we love them."<sup>106</sup> Based on population data, the United States should embrace immigration reform as a way to increase its resiliency, especially given the aging of the U.S. population and its need for caretakers in the future.

Today, the United States is home to a record 42 million immigrants and 37 million U.S. born children of immigrants.<sup>107</sup> It is predicted that by 2050, more than two-thirds of the nation's total population growth and approximately a 90-percent increase in its working-age population will be accounted for by immigrants and their U.S.-born children.<sup>108</sup> The government projects that in five years, minorities will comprise more than half of children under 18.<sup>109</sup> Not long thereafter, the total U.S. white population will begin an inexorable decline in absolute numbers, due to aging baby boomers.<sup>110</sup> As a whole, the non-white population increased by 1.9 percent to 116 million, or 37 percent of the United States. The fastest percentage growth is among multiracial Americans, followed by Asians and Hispanics. Non-Hispanic whites comprise 63 percent of the

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<sup>105</sup> Barack Obama, *Empowering Local Partners to Prevent Violent Extremism in the United States* (Washington, DC: Office of the President of the United States, 2011), [http://www.whitehouse.gov/sites/default/files/empowering\\_local\\_partners.pdf](http://www.whitehouse.gov/sites/default/files/empowering_local_partners.pdf).

<sup>106</sup> Fred Barnes, "America and Its Immigrants," *The Weekly Standard*, accessed April 24, 2014, [https://www.weeklystandard.com/articles/america-and-its-immigrants\\_740069.html](https://www.weeklystandard.com/articles/america-and-its-immigrants_740069.html).

<sup>107</sup> Taylor, *The Next America: Boomers, Millennials, and the Looming Generational Showdown*, 1437–6129.

<sup>108</sup> Hope Yen, "Census: White Majority in U.S. Gone by 2043," *NBC News*, June 13, 2013, [http://usnews.nbcnews.com/\\_news/2013/06/13/18934111-census-white-majority-in-us-gone-by-2043?lite](http://usnews.nbcnews.com/_news/2013/06/13/18934111-census-white-majority-in-us-gone-by-2043?lite).

<sup>109</sup> *Ibid.*

<sup>110</sup> *Ibid.*

United States; Hispanics, 17 percent; blacks, 12.3 percent; Asians, 5 percent; and multiracial Americans, 2.4 percent.<sup>111</sup>

***a. Diversity Within***

One way for nations to prevent economic sclerosis and healthcare skills gaps that occur when their population ages is to replenish their workforce with immigrants. In this realm, the United States boasts the world's most enviable demographics.<sup>112</sup> Immigrants still see the United States as a good place to immigrate, which adds to the nation's diversity. Diversity is critical for many successful organizations' ability to innovate and adapt in a fast-changing environment. Diversity is essential to growth and prosperity of any organization: diversity of perspectives, experiences, cultures, genders, and age.<sup>113</sup> In short, diversity breeds innovation. Homeland security can take a page out of successful businesses' playbook on diversity.

The implication for homeland security is that the enterprise must be at the legislative planning table for a functional immigration system that is fair, ensures the nations' security, and enables the best and brightest to immigrate. It is important from a homeland security perspective to understand immigration, border control, and citizenship as a core subsystem within its ecosystem. Understanding the future demographics of immigration and how it will impact homeland security will require a reevaluation of the defensive posture for border control of immigrants to one that establishes effective processing of immigrants from other countries.

Yet, this nation is also experiencing migration changes. Domestic migration is also a subsystem of homeland security. The movement of people now reflects a country in which power has shifted away from the federal government, and even states, to cities

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<sup>111</sup> Taylor, *The Next America: Boomers, Millennials, and the Looming Generational Showdown*, 4345–4346.

<sup>112</sup> Ibid.

<sup>113</sup> Ekaterina Walter, "Reaping the Benefits of Diversity for Modern Business Innovation," *Forbes*, January 14, 2014, <http://www.forbes.com/sites/ekaterinawalter/2014/01/14/reaping-the-benefits-of-diversity-for-modern-business-innovation/>.

of metropolitan areas.<sup>114</sup> While Washington and states bicker and delay, cities and metros have emerged as the vanguard of policy innovation and action.

### ***b. Recommendations***

In light of the inexorable diversity of the American population, the following recommendations stand out.

- In anticipation of an aging population cohort that is not equally matched with a younger population cohort for caretaking needs, the United States should create a functional immigration system that will allow for the influx of possible caretakers related to healthcare and long-term care.
- The DHS should maximize the “sharing economy” of a younger digital native workforce to engage the community within the homeland security enterprise and the nation’s local communities.

### **3. We, the People, Are More Technologically Linked**

The world and the things upon which this nation depends to navigate daily lives are becoming more and more interconnected and interdependent, in large part, due to technology. All demographic ages are forming digital communities and using technology. For most of the world, technology is a resource-liberating mechanism; it can make the once scarce the now abundant.<sup>115</sup> For this reason, some 73 percent of online U.S. adults now use a social networking site of some kind.<sup>116</sup> Facebook is the dominant social networking platform in the number of users, but a striking number of users are now diversifying onto other platforms.

In regards to homeland security and the digital world, in the decade after 9/11, when the institutions of government, finance, and corporate America seemed unable to respond effectively to meet the needs of the nation in times of crisis, individual Americans began to take it upon themselves to link up, become connected, form new communities, and take action to make a difference where possible. These types of

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<sup>114</sup> “The Metropolitan Revolution—Videos,” accessed November 15, 2014. <http://metrorevolution.org/videos/>.

<sup>115</sup> Diamandis and Kotler, *Abundance: The Future Is Better Than You Think*, 6.

<sup>116</sup> Maeve Duggan and Aaron Smith, “Social Media Update 2013,” *Pew Research Center*, 1–18, December 30, 2013, [http://www.pewinternet.org/files/2013/12/PIP\\_Social-Networking-2013.pdf](http://www.pewinternet.org/files/2013/12/PIP_Social-Networking-2013.pdf).

connections are steadily increasing.<sup>117</sup> These new digital networks are building community engagement as never seen before. Social networking holds the opportunity to become more decentralized in engagement, which can support collective action, important in either a natural or manmade disaster. As an example, the current White House, We, the People petition website allows citizens to participate actively in government to create a welcoming atmosphere of openness, creativity, and transparency.<sup>118</sup>

The increase in social connection and demographic diversity allows for a more nuanced and creative bottom-up approach to homeland security. Now, loosely coordinated groups can conduct large-scale coordination at low-cost, and serious and complex work without institutional direction.<sup>119</sup> It is important to highlight that these connected groups can achieve things previously out of reach for any organizational structure. Furthermore, social citizens participating in communities have the potential to change the world in profound ways. Due to the potential of networked personal communications devices to function in a crisis, independently of or despite a central authority, officials really do not have a choice in embracing a networked disaster and terrorism response strategy.<sup>120</sup> An effort has been made to involve a variety of commercial applications familiar to the general public, particularly ones that serve to create online and physical social networks, and thereby, fostering “swarm intelligence.”<sup>121</sup> Incorporating the social citizen into the current and any future narrative of homeland security is paramount.

To obtain a sneak peek into how this inclusion may play out in America, the city of Reykjavik in Iceland can be used as an example. Most people in Iceland live in

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<sup>117</sup> Stephen Flynn and Scott Bates, *Connecting America: Building Resilience with Social Media* (Washington, DC: Center for National Policy, 2011).

<sup>118</sup> Clay Shirky, *Here Comes Everybody: The Power of Organizing without Organizations* (New York: Penguin Press, 2008), Kindle edition, 47.

<sup>119</sup> Ibid.

<sup>120</sup> David W. Stephenson and Eric Bonabeau, “Expecting the Unexpected: The Need for a Networked Terrorism and Disaster Response Strategy,” *Homeland Security Affairs* III, no. 1, February 2007, 7.

<sup>121</sup> Ibid.

Reykjavik, and they are very well technologically connected with two-thirds of their population using social media. The Best party of Iceland allows citizens to participate directly in policy making by using digital technology and platforms that allow people to debate and vote ideas up or down. According to Dr. Andy Williamson, a digital democracy consultant, “[W]hat Iceland shows us is that the Internet can be an instrument for change, but it cannot break existing power structures.”<sup>122</sup>

This experiment in democracy allows people to participate directly in government. Gnarr, the new mayor of Reykjavik, says that to maintain democracy, it is first essential to find ways for people to participate in it. Gnarr is confident that the march of direct democracy in Iceland will not easily be halted. Gnarr summarizes his direct democracy ideas as describing the Best party as the first little mammal in the land of the dinosaurs. “The dinosaurs don’t know that their time is over yet. And the little guy, who is mostly in his hole for the moment, he’s the future.”<sup>123</sup>

The lesson for the homeland security ecosystem is that geopolitics of governmental proximity is important. As power is more centralized at the local level, mayors and local authorities manage community proximity very differently because it is easier on a smaller scale and it is more personal to the community. It is important for those in homeland security to understand that to ignore the dynamics of geopolitical proximity, changing migrations, demographics and will of the people, do so at their peril.

#### ***a. The Next Big Thing***

Technology often offers the “next big thing.”<sup>124</sup> With the explosion of social media like blogs, Facebook, Twitter, Instagram, Reddit, wikis, Linked-in, Flickr, and YouTube, the culture is evolving from top-down, hierarchical controls to greater reliance and coordination through peer-to-peer communications and negotiation. Free and low-

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<sup>122</sup> Alexandra Topping, “Reykjavik’s Radical Mayor Blazes a Trail for the Revolution in Digital Democracy,” *The Guardian*, April 25, 2013, <http://www.theguardian.com/world/2013/apr/25/reykjavik-mayor-digital-democracy>.

<sup>123</sup> Ibid.

<sup>124</sup> Jerry Mechling, “Will Massive Collaboration Work for You?” *Governing Technology*, January 28, 2009.

cost technology tools for collaboration are replacing multimillion-dollar software programs.<sup>125</sup>

People utilize technology in their everyday lives and interactions, which is a major shift from the nightly news and corner newsstands to obtain information about the world. Essentially, it is a power paradigm shift that allows a shift from waiting for strangers on television, radio, or newsprint to interpret the world's event to a one-on-one active experience. It is a movement from passive to engaged.<sup>126</sup> In this kind of interaction, new constructions of social learning and understanding are established. For homeland security practitioners, the point made clear is technology alone is not the solution, it is the transformation; social media is not about the applications, it is about the sociology.<sup>127</sup>

**b. Recommendations**

- Develop an M-homeland security system (M-HLS—mobile homeland security) to incorporate community engagement using various technology and social media tools into the homeland security discourse from the local level perspective.
- Work toward capitalizing on “swarm intelligence” of willing people at the community level to become part of the homeland security network.

**4. We, The People, are Less Trusting of Government**

The old linear, command and control laws of power, confronted with a faster moving and more intricately ordered system, are now in need of modification.<sup>128</sup> No longer a nation in surplus with an unrivaled, expansionist techno-industrial economic base, America is in debt and arguably becoming post-industrialized, or, as some would

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<sup>125</sup> Mechling, “Will Massive Collaboration Work for You?”

<sup>126</sup> Preetha Ram, “From One-to-one to Many-to-many: Powering Peer Learning in Open Learning Environments,” Elearnmag.acm.org. October 2013, <http://elearnmag.acm.org/featured.cfm?aid=2537893&rss=true>.

<sup>127</sup> Brian Solis, “Digital Transformation Is About Empathy First and Technology Second,” Brian Solis RSS, November 10, 2014, [http://www.briansolis.com/2014/11/digital-transformation-empathy-first-technology-second/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+briansolis+%28Brian+Solis%29](http://www.briansolis.com/2014/11/digital-transformation-empathy-first-technology-second/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+briansolis+%28Brian+Solis%29).

<sup>128</sup> Joshua Cooper Ramo, *The Age of the Unthinkable: Why the New World Disorder Constantly Surprises Us and What to Do about It* (New York: Little, Brown and Company, 2009), 14.

have it, de-industrialized.<sup>129</sup> At the same time, this country no longer faces a single geo-strategic adversary; rather, the United States faces challenges that neither generate widespread consensus or military solutions. Natural events like Hurricanes Katrina and Rita, diverse events like 9/11, WikiLeaks, the debt crisis, oil spills, pandemic threats, and terrorist networks are evidence of a growing complex and multi-dimensional vulnerability.<sup>130</sup> After each event, public trust decreases in top-down governmental solutions that seem incompatible with dealing with the complexity of the challenge.

Interestingly, disaster after disaster, both big and small, citizens are taking matters into their own hands to provide for their safety, families, neighbors, and community. After experiencing the 2005 response to Hurricane Katrina, public trust in the ability of government to respond in times of a nuclear or radiological terrorist attack crisis dropped to 52 percent.<sup>131</sup> Overall, the public's trust in the federal government to do what is right dropped to 19 percent in October 2013.<sup>132</sup> After 9/11, as the government searched for how such a calamity occurred and who to blame, one reemerging theme prominently stood out, an inability to "connect the dots" caused by lack of intelligence sharing and coordination among various governmental agencies.<sup>133</sup> As a consequence, Americans are skeptical of their government, at a time when mutual good will is most urgent.

Regaining the public's trust will be difficult but not impossible. The social science literature points to several factors on effective ways to understand and regain trust once it is lost. Trust is social currency or social capital. It is also a very necessary ingredient for a functional homeland security system. Like the chicken and the egg, one thing is for sure—it is not possible to have one without the other. According to the

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<sup>129</sup> Morton, *Next-generation Homeland Security: Network Federalism and the Course to National Preparedness*, 3.

<sup>130</sup> Ibid.

<sup>131</sup> Jon Cohen and Gary Langer, "Poll: Confidence in Anti-Terror Response Drops," *ABCnews.com*, October 9, 2005, <http://abcnews.go.com/Politics/PollVault/story?id=1189755&page=1>.

<sup>132</sup> Carroll Doherty and Danielle Gewurz, *Trust in Government Nears Record Low, But Federal Agencies Are Viewed Favorable* (Washington, DC: U.S. Pew Research Center, 2013).

<sup>133</sup> Stephanie Cooper Blum, "Chapter 5: The Department of Homeland Security and Intelligence: Past, Present, and Future," in *Homeland Security and Intelligence* (Santa Barbara, CA: Praeger Security International, 2010), 78.



Merriam-Webster dictionary definition of trust as a noun, it is a “belief that someone or something is reliable, good, honest and effective.”<sup>134</sup>

Trust is a basic human experience between people and communities. The need for trust arises from interdependence with others. People often depend on other people to help obtain, or at least not to frustrate, the outcomes this nation values. As interests with others are intertwined, it is crucial to recognize that an element of risk is involved insofar as situations are often encountered in which the cooperation sought cannot be compelled. In this context, trust can be very valuable in social interactions,<sup>135</sup> and a necessary component to address danger of all sorts and sizes. Homeland security and emergency managers across the nation must avoid alienating the very people they are responsible for protecting.<sup>136</sup> A rebuilding of the public trust is vital.

**a. *Rebuilding Trust***

Lack of trust, perceived misplaced investments, unexplained repeated alerts to risks, and bungled emergency responses have created a deep division between government strategies and the willingness of the American public to embrace them.<sup>137</sup> To be trustworthy, government must become more *reliable, honest and competent*<sup>138</sup> at the things it is responsible for and to whom. Being reliable, honest and competent are the three necessary elements of trustworthiness.<sup>139</sup> Despite the assertions of some scholars

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<sup>134</sup> “Trust,” accessed May 2, 2014, <http://www.merriam-webster.com/dictionary/trust>.

<sup>135</sup> Roy J. Lewicki and Edward C. Tomlinson, “Trust and Trust Building,” ed. Guy Burgess and Heidi Burgess, Conflict Information Consortium, University of Colorado, Boulder, posted December 2003, <http://www.beyondintractability.org/essay/trust-building>.

<sup>136</sup> Flynn, “Recalibrating Homeland Security: Mobilizing American Society to Prepare for Disaster,” 130–40.

<sup>137</sup> Robert Bach and David Kaufmann, “A Social Infrastructure for Hometown Security: Advancing the Homeland Security Paradigm,” *Homeland Security Affairs*, 1, May 2009, <http://www.hsaj.org/?fullarticle=5.2.2>.

<sup>138</sup> Onora O’Neill, “What We Don’t Understand About Trust” (speech, Ted.com, House of Parliament, Great Britain, London, June 2013).

<sup>139</sup> *Ibid.*

<sup>140</sup> Walter Mischel and Yuichi Shoda, “A Cognitive-Affective System Theory of Personality: Reconceptualizing Situations, Dispositions, Dynamics, and Invariance in Personality Structure,” *Psychological Review* 102, no. 2 (1995): 246–268.

that broken trust cannot be repaired, recent research indicates a more optimistic view. However, rebuilding trust is not as straightforward as building trust in the first place.

After trust has been damaged two key considerations must be contemplated.<sup>140</sup>

- Dealing with the stress the violation imposed on the relationship
- Determining if future violations will occur

After a trust violation occurs, cognitive affective behavior fallout ensues. Cognitive affective behavior is a comprehensive understanding of the person, the situation, and the interaction between the person and the situation.<sup>141</sup> In short, the public will try to understand why the trust violation occurred in the context of the situation in which trust was broken. The first critical question is will the American people be willing to reconcile? If citizens believe that the government will not make efforts at righting the wrongs and minimizing future violations, citizens have no incentive to attempt reconciliation and restore trust.<sup>142</sup> Reconciling with citizenry will require government at all levels to seek to build open and diverse partnerships that understand the supports needed by communities couched in mutual trust, respect, and understanding. Government at all levels will have to *practice*, not just talk about reliability, honesty, and competency. Government must have an open and honest dialogue with communities about the local and global threats they face. Additionally, a transparent government that also promotes mutual community-based problem solving with citizens is crucial to building a sense of trustworthiness.<sup>143</sup>

#### ***b. Recommendation***

To improve trust in the homeland security enterprise, specifically, leaders should foster a social construction of a “do ask, do tell” policy for homeland security: Ask people to be active participants in their own security, instead of demand and tell people

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<sup>140</sup> Lewicki and Tomlinson, “Trust and Trust Building,”

<sup>141</sup> Ibid.

<sup>142</sup> Sammantha L. Magsino, *Applications of Social Network Analysis for Building Community Disaster Resilience: Workshop Summary* (Washington, DC: National Academies Press, 2009), Kindle edition, 989–990.

<sup>143</sup> Shirky, *Here Comes Everybody: The Power of Organizing without Organizations*, 20–21.

more about the threats local communities face and the overall national threats in plain language.

### **C. CONCLUSION**

In summary, people are living in the middle of a remarkable increase in the ability to share, to cooperate with one another, and to take collective action, all outside the framework of traditional institutions and organizations. People now have communication tools flexible enough to match social capabilities.<sup>144</sup> These new ways of coordination, collaboration, and communication are all unique opportunities for the homeland security enterprise to explore for the future. In America, the key to preserving social and civic cohesion among a diverse population is one in which inclusion is figured into the demographic profile. Demographic change forces people to examine the here and now and attempt to predict both opportunity and challenge based on the new faces of who is participating in the community.

As with ecosystems in nature, they are ever changing but adapt and are dynamic to various populations within it. So too, will the homeland security ecosystem adapt to dynamic change within its system that will be older, more diverse, less trusting, and more linked by social media and technology.

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<sup>144</sup> See Shirky, *Here Comes Everybody: The Power of Organizing without Organizations*.

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### III. UNDERSTANDING PEOPLE-FIRST THROUGH SOCIAL CONNECTION

The problems that we create with our current level of thinking cannot be solved by the same level of thinking.

~ Albert Einstein

The author's following narrative as a young adult lends to understanding others through social constructs.

*When I was a young adult, I led hikes in the Pisgah National Forest and worked in a day camp with children. I had a new group of about 15 third graders each week. I figured out quickly that for this little community, there had to be ground rules. I had the kids formulate the rules—though I did agitate behind the scenes for two that I always included: “When the leader speaks, listen,” and “Be helpful.” The ground rules were always constructed in the positive. The kids might say, “don’t throw rocks,” and I’d write, “leave the rocks on the ground.” The kids might say, “don’t hit people,” and I’d write, “be kind to each other.”*

*But ground rules alone weren’t enough. I had to model the behavior I wanted to see in them. So, I used my manners. I showed respect for the child as a person. I asked instead of demanded. I encouraged instead of belittled. I drew attention to good, helpful, kind behavior instead of calling attention to bad behavior. And when there was an unruly kid, I asked the group to help get him or her in line, never belittling the child but saying to the group, for example, “How can we help Bobby understand why it is important not to throw rocks?” The kids took care of getting Bobby in line because they had socially constructed the rules, and they thus were invested in them. The key here is I was constructing the environment for the behavior I wanted to see.<sup>145</sup>*

People are influenced by the words and actions of others. People learn from one another what is acceptable in society. Thaler and Sunstein, in their book, *Nudge*, points

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<sup>145</sup> Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York: Open Road Media, 2001), Kindle edition, 2–3.

out that learning from others is how societies develop and that the most effective way to nudge people for good or bad is by social influence.<sup>146</sup>

AI is a kind of nudge, which is a strength-based, capacity-building approach to transforming human systems toward a shared image of their most positive potential by first discovering the very best in their shared experience. People are why AI works.

For homeland security practitioners, this story provides a vital lesson, which is an AI approach to understanding people and community. The focus is on the subtle but powerful human-centric traits for cooperative acts and the desire to help. Additionally, peer-to-peer relationships are powerful ways to change behavior. There are elements of AI. It is about tapping into people's natural desire to cooperate and change, which is present in every human-centric system.

It is important to emphasize the subtle psychological shift that occurred. In the 12-year social construction of homeland security, operations start from a "Because I said so," model. This type of model is a military social construction, in which an order is given, and the subordinates then obey, regardless if they think it is a good idea or not. The approach works well in a hierarchical and discipline-oriented setting, but it fails with autonomous diverse networks in communities. In fact, it is counter-productive; "Because I said so," has never motivated anyone to do anything. One example of this mentality was the military response to a Ferguson, Missouri shooting of a black teenager in 2014. In response to community upheaval, the military apparel, equipment, and defensive posture all pointed to a socially constructed message of "because I told you so," mentality, a military based command structure.<sup>147</sup> Even when Captain Ron Johnson, a well-known police trooper, stepped in to calm the crowd by walking and talking among the people, it was too late to stem the anger and discontent.<sup>148</sup>

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<sup>146</sup> Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven, CT: Yale University Press, 2008).

<sup>147</sup> Meghan Keneally, "Ferguson Braces for Grand Jury's Michael Brown Decision," *ABC News*, accessed November 13, 2014, <http://abcnews.go.com/US/ferguson-braces-grand-jurys-michael-brown-decision/story?id=26886727>.

<sup>148</sup> Ibid.

Operating from an AI approach, a people-centric model works best. To illustrate, much of how people understand the world comes from the social influences in which they grew up. These influences—parents, peers, culture, religion, language, and values—form a unique knowledge of the world. This knowledge and the process by which it is acquired are commonly discussed by the term “social construction.”<sup>149</sup> Social construction is about people interacting with each other over time to create attitudes and behaviors that are first incorporated into daily lives, and then become habits. These habits of thought and action then become part of the culture. This process could happen on a large scale, as with gender, race, patriotism, volunteerism, to name a few, or on a smaller scale like in a corporation, community, or government organization, like the DHS.

This social construction of knowledge is based on the words, language, and acts *chosen* within the community. This kind of knowledge becomes developed and transferred into a kind of general understanding. It is worth understanding this process and how it congeals for people in the community.<sup>150</sup> Since this kind of knowledge or construction is not fixed, it can be changed by purposeful use of language and actions for a future-oriented collective resiliency. For a community, if social construction joins hands with its sister, AI, great potential exists for change. This nation’s future homeland security narrative could be strengthened by utilizing an AI framework that builds on the human-centric trait of cooperative acts and desire to help as a valuable part of the nation’s strengths and assets. The belief in the power of appreciation to achieve change stands in contrast to the belief in the power of criticism to produce change.<sup>151</sup> Growing behavior and producing change through appreciation does not involve threat or coercion, or humiliation or fear, or any of the other negative emotions associated with achieving behavior change through criticism.<sup>152</sup>

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<sup>149</sup> Berger and Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*, 2–3.

<sup>150</sup> Ibid.

<sup>151</sup> Sarah Lewis, *Appreciative Inquiry for Change Management: Using AI to Facilitate Organizational Development* (Center City Philadelphia: Kogan Page, 2011), Kindle edition, 734–736.

<sup>152</sup> Ibid.

AI is comprised of two core principles, the constructionist principle and the collaborative principle. As a constructionist principle, knowledge is created as a social construct by interactions with others, and most importantly, the creation of a shared knowledge. In short, people learn from each other, and the reality is created through general agreement among community members. What a given community of people knows at any particular moment essentially defines for them the options they have available for organizing.

Collaboration opens up a new avenue to social construction in which the community can create a broad range of actions for any given challenge, as well as also create strong relationships and connections, which are important to disaster survival.<sup>153</sup> This chapter focuses on these two constructionist principles to discuss collaborative systems to address problems, such as AI, positive deviancy, cognitive surplus, many-to-many, and peer-to-peer interactions.

#### **A. APPRECIATIVE INQUIRY UNWRAPPED**

AI's capacity-building process seeks to identify a system's strengths, which are usually tied to cooperative acts. It is a movement away from constantly correcting lessons learned to imagining a future based on the systems strengths, and then actively designing a system that fits the challenge. The term "appreciative inquiry" was first written about in an analytic footnote in the feedback report of "emergent themes" by Cooperrider and Srivastva for the Board of Governors of the Cleveland Clinic in 1980.<sup>154</sup> Cooperrider completed his doctoral dissertation "Appreciative Inquiry: Toward a Methodology for Understanding and Enhancing Organizational Innovation" at Case Western Reserve University, which has evolved into a social constructionist strategy for organizational change.<sup>155</sup> The AI theme can be heard in management guru Peter Drucker's quote,

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<sup>153</sup> Lewis, *Appreciative Inquiry for Change Management: Using AI to Facilitate Organizational Development*, 734–736.

<sup>154</sup> Jane M. Watkins and Bernard Mohr, "Appreciative Inquiry Commons: AI History and Timeline," Appreciative Inquiry Commons, accessed August 22, 2014, <http://3A%2F%2Fappreciativeinquiry.case.edu%2Fintro%2Ftimeline.cfm>.

<sup>155</sup> Ibid.



“[T]he task of organizational leadership is to create an alignment of strengths in ways that make a system’s weaknesses irrelevant.”<sup>156</sup>

The 5-D model process (Figure 1) provides a visual framework for the AI process. The model is used as a framework for large-scale transformation of organizations by bringing people together to work through the 5-D step model. The model’s intent is to bring about a cultural transformation by changing the way people think, which is problem focused most of the time. It is human nature to be focused on problems, to fix something. The 5-D model starts with the assumption that people are smart talented and gifted. Key to working through the 5-D model is that the focus is on people with the belief that if people change, organizations can also change.<sup>157</sup>

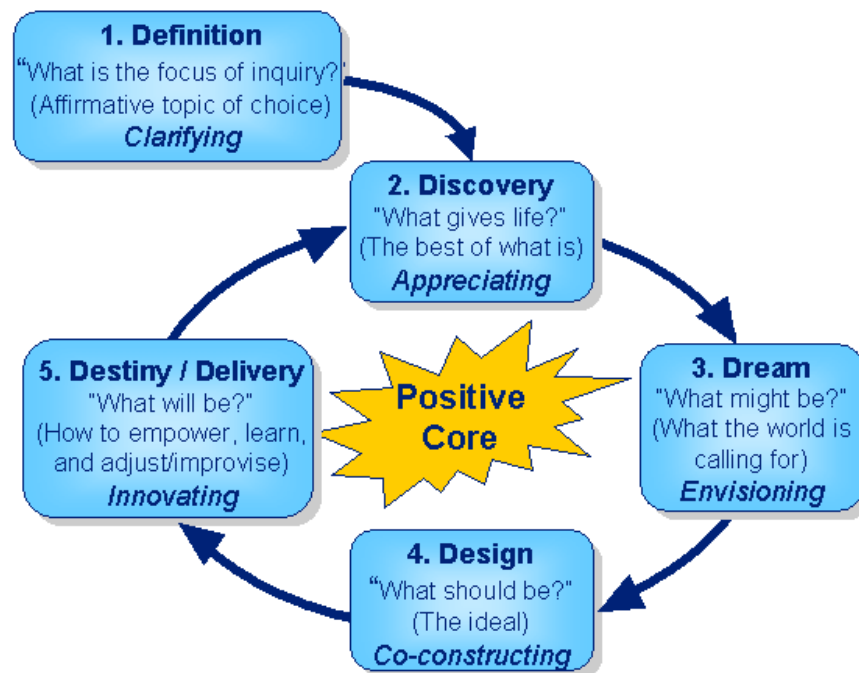


Figure 1. Appreciative Inquiry: 5-D Model Process<sup>158</sup>

<sup>156</sup> Peter Drucker, “The Way Ahead: The Time to Get Ready for the Next Society Is Now,” *The Economist*, November 1, 2001, <http://www.economist.com/node/770887/print>.

<sup>157</sup> Cooperrider and Whitney, *Appreciative Inquiry: A Positive Revolution in Change*, 135–136.

<sup>158</sup> Susan Donnan, “What Is Appreciative Inquiry?” Metavolution, accessed December 5, 2014, [http://www.metavolution.com/rsrc/articles/whatis\\_ai.htm](http://www.metavolution.com/rsrc/articles/whatis_ai.htm).

- **Definition:** Clarify or identify the issue or challenge as the focus of exploration or inquiry
- **Discovering/Appreciating** what the DHS is best at incorporating radical inclusion of all stakeholders
- **Dreaming** or envisioning what the DHS could be by mapping out its assets at all levels including the community
- **Designing** a strategy for the DHS based on its challenges yet understanding its strengths and assets. Use social construction principles of language and constructive acts to design a more resilient homeland security framework with radical inclusion of all stakeholders within the homeland security enterprise and the public.
- **Destiny** or building the framework to make the strategy work

#### 1. **Case Example of Appreciative Inquiry: 2001 U.S. Navy**<sup>159</sup>

In 2001, the U.S. Navy conducted a leadership summit using the AI process because it recognized that many people who use information technology were able to utilize it to make informed decisions. The Navy sought to familiarize potential leaders to synthesize information and foster change in a short period of time. This summit was the culmination of a two-year journey of exploration of how best to develop leaders. One method used was the AI process through which people discover the best of what is and tap into core values and competencies. The intent was to jump-start the U.S. Navy change process. The summit included 260 people ranking from Seaman to Admiral. The participants wore civilian clothes that did away with standard formalities and made available a less hierarchical, more open environment. Each person wore a special neck lavalier with a special logo announcing Leadership Summit Bold and Enlightened Naval Leaders at Every Level, *Forging an Empowered Culture of Excellence* and their name.

This journey began in January 2000 when the Under Secretary of the Navy (Honorable Jerry Hultin) met with 19 mid-grade officers at the Center for Executive Education at the Naval Postgraduate School. The intent was to explore the Navy/Marine

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<sup>159</sup> Helene C. Sugerman, "The Navy Case: Bold and Enlightened Naval Leaders at Every Level," Appreciative Inquiry Commons, 2001, <http://3A%2F%2Fappreciativeinquiry.case.edu%2Fintro%2FbestcasesDetail.cfm%3Fcoid%3D3509>.

Corps of 2020. The goal was to “attract and retain great people.” A central part of this goal was to develop leaders. By October, they briefed the Chief of Naval Operations (CNO) of their findings. In January 2001, the steering committee met to discuss membership and milestones. In May 2001, the group met with the CNO to conduct an appreciative interview on leadership. In June, a 3-day steering committee workshop took place during which major stakeholders and participant organizations were identified, final approval was given for the leadership summit, and approval was granted for the interview team to collect examples of outstanding leadership. In August, the interview team held a 2-day workshop on interviewing techniques. In October, the interview team reviewed over 300 collected stories. The team completed the review of leadership stories and published its findings in November. The four-day leadership summit took place in December 2001.

During the four days, the four D’s of AI were used as a methodology to work through changes in thinking about leadership issues in the Navy.

- On Day 1, the process of **Discovery** revealed the positive core of the U.S. Navy.
- On Day 2, the **Dream** process permitted the assembled people to imagine what is possible when the Navy is at its very best.
- On Day 3, at the beginning of the **Design** phase, attendees created provocative propositions that included the shared vision of empowered decision making. All attendees were included in making design decisions.
- On Day 4, the **Destiny** phase looked at both how to help leaders develop the necessary skills and how what is needed is put in place for the Navy (the organizational structure—system) to move forward.

## **2. Results**

Looking to create a new model for the 21st century, this summit identified eight values: integrity, trust, honesty, respect, pride, hope, compassion, and loyalty. Participants used AI methods to focus on their high point experiences in the Navy. After discovering commonalities and hopes for the future, they referenced these strengths to create “provocative propositions” and to generate pilot action plans for positive change. Tangible outcomes include over 30 pilot projects, such as 360-degree feedback, E-

mentoring, a leadership portal website, a Center for Positive Change, and additional summit work resulted from these activities.

The summit enabled every voice at every level to be heard. The senior leaders present encouraged the junior people present to speak up and then they listened to what these junior people had to contribute. This encouragement allowed all voices to be heard. The real power came from everyone being willing to listen. Also, the CNO championed a quality process that engaged every level in the Navy in a conversation about one of the cornerstones of success—leadership.

### **3. Observations**

The omnipresence of questions, and their inherent potential to evoke completely new worlds of possibilities, suggests a second insight even more central to AI. People move—emotionally, theoretically, relationally, and spiritually—in the direction of the questions they ask.<sup>160</sup>

AI maps the positive core of an entity. The appreciative part is about recognizing the best in people and the inquiry is about exploring the questions asked about what gives life to people and their communities. AI is people-centric because it is collaborative in every aspect. It is collaborative because people work together, discover, and create what they see as positive and successful in the community. It is people-centric because it is fully inclusive. It invites everyone in and all voices are important to co-discover, co-create, and co-imagine needed change. It explores, based on the strengths and assets of people who survive and move toward the potential of the community.

## **B. POSITIVE DEVIANCE AND POSITIVE DEVIANTS**

Positive deviance (PD) is the first cousin to AI. The term “positive deviance” initially appeared in nutrition research literature with the publication of a book entitled *Positive Deviance in Nutrition* by Tufts University nutrition professor, Marian Zeitlin, in the 1990s, in which she compiled a dozen surveys that documented the existence of

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<sup>160</sup> Frank Barrett and Ronald E. Fry, *Appreciative Inquiry—A Positive Approach to Building Cooperative Capacity* (Taos, NM: Taos Institute Publications, 2012), Kindle edition, 1082–1084.

“positive deviant” children in poor communities who were better nourished than others.<sup>161</sup> The essence of the meaning of PD is that within every community, certain individuals are able to influence the behavior of others. The study of PD, the system, and individuals, is founded on the premise that at least one person in a community, working with the same resources as everyone else, has already licked the problem that confounds others.<sup>162</sup> Along this continuum of thought, the PD approach is one among a broad set of participatory methods.

The basic premise has three parts. The first is that solutions to seemingly intractable problems already exist. Second, members of the community have already discovered the solutions. Third, these positive deviants have succeeded even though they share the same constraints and barriers as others in the community.<sup>163</sup> The secret sauce of the PD process is how it engages and transforms the social dynamics that have kept things stuck.<sup>164</sup>

Positive deviants are those in the community who serve as community connectors and catalysts, and the community readily knows who they are. Moreover, from a positive PD perspective, *individual difference* is regarded as a community asset, which is essential in discovering noteworthy variants.<sup>165</sup> Jerry and Monique Sternin made the study of PD famous in their application of the principle to childhood malnutrition in Vietnam. In the early 1990s, Jerry Sternin, a visiting scholar at Tufts University, and his wife, Monique, experimented with Zeitlin’s ideas and operationalized the PD concept as a tool to promote behavior and social change to organize various PD-centered interventions around the world. PD was demonstrated as a social change approach, first to childhood malnutrition, and then expanded its successful application to a variety of seemingly

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<sup>161</sup> “History of Positive Deviance,” accessed September 4, 2014, [http://www.positivedeviance.org/about\\_pdi/history.html](http://www.positivedeviance.org/about_pdi/history.html).

<sup>162</sup> Pascale, Sternin, and Sternin, *The Power of Positive Deviance: How Unlikely Innovators Solve the World’s Toughest Problems*, 3.

<sup>163</sup> Ibid., 4.

<sup>164</sup> Ibid., 11.

<sup>165</sup> Ibid., 3.

intractable problems in diverse sectors, such as public health, education, and child protection, among others.<sup>166</sup>

### **1. Case Study: Vietnam Children**

Traditional aid supplemental feeding programs were rarely maintained after the programs ended. Jerry and Monique were asked to design an approach that would enable the community to improve and sustain the young children's health status. Building on Marian Zeitlin's ideas of PD, working with four communities and a population of 2,000 children under the age of three, the Sternins invited the community to identify poor families who had managed to avoid malnutrition despite all odds, faced the same challenges and obstacles as their neighbors, and without access to any special resources.

These families were the positive deviants. They were "positive" because they were doing things right, and "deviants" because they engaged in behaviors that most others did not. The PD families broke with Vietnamese cultural norms in two ways. The Sternins' discovered that caregivers in the PD families collected tiny shrimp and crabs from paddy fields, and added those, along with sweet potato greens, to their children's meals. These foods were accessible to everyone, but most community members believed they were inappropriate for young children. The PD families were also feeding their children three to four times a day, rather than twice a day, which was customary.

The communities developed an activity that enabled all the families with malnourished children to rehabilitate their children and to learn how to sustain their children at home on their own, by inviting them to practice the demonstrably successful but uncommon behaviors that they had discovered in their communities. The pilot project resulted in the sustained rehabilitation of several hundred malnourished children and the promotion of social change in their communities.<sup>167</sup>

The case study illustrates that finding positive deviants in the community falls under an AI approach. Instead of asking, "why are so many starving?" it asked, "who are

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<sup>166</sup> "History of Positive Deviance."

<sup>167</sup> "History of Positive Deviance."

the people in the community that are well-nourished?” That is an AI approach because it makes the assumption that the positive exists and it is yet to be discovered. The focus on the community, its people and the social networks is far from linear.

The important concept to take away is that each community must make the very particular journey to mobilize itself to overcome fatalism and resignation to discover the wisdom latent in community.<sup>168</sup> This approach bears repeating. The community must make the discovery itself. It alone determines how change can be disseminated through the practice of new behavior, not through explanation or edict from an expert or hierarchy.<sup>169</sup> In regards to individuals who are positive deviants, they function as innovators, catalysts, and connectors in the community. Positive deviants have the special gift of bringing people together and their gift is not just knowing a lot of people but the ability to be a connector in the community.<sup>170</sup>

## **2. Observations**

All communities have positive deviants, catalysts, and connectors. The key is to identify them and utilize their positive deviance for social influence within the community. Core to their success, positive deviants use associational thinking. First and foremost, positive deviants act as change agents and innovators. Associative thinking happens as the brain tries to synthesize and make sense of novel inputs.

Most think creativity is an entirely cognitive skill; it all happens in the brain. A critical insight from research is that an individual’s ability to generate innovative ideas is not merely a function of the mind, but also a function of behaviors. This is good news for homeland security practitioners because it means that if a change in behavior occurs, the potential exists for an improvement in creative impact.<sup>171</sup> It helps foster the ability to

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<sup>168</sup> Pascale, Sternin, and Sternin, *The Power of Positive Deviance: How Unlikely Innovators Solve the World’s Toughest Problems*, 8.

<sup>169</sup> Malcolm Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference* (New York: Little Brown and Company, 2006), 38.

<sup>170</sup> Clayton M. Christensen, Jeff Dyer, and Hal Gregersen, *The Innovator’s DNA: Mastering the Five Skills of Disruptive Innovators* (Boston, MA: Harvard Business Review Press, 2011), Kindle edition, 3.

<sup>171</sup> *Ibid.*, 23.

imagine. Since the homeland security enterprise was criticized for its lack of imagination that 19 disenfranchised men would fly planes into tall buildings, the associational thinking needed to foster imagination of potential threats is important. Positive deviants and associational thinking helps communities discover new directions by making connections across seemingly unrelated questions, problems, or ideas.<sup>172</sup>

Put simply, innovative thinkers, such as positive deviants, connect fields, problems, or ideas that others find unrelated. First, they actively desire to change the status quo, and secondly, they regularly take smart risks to make that change happen.<sup>173</sup> Since every community has positive deviants and community innovators, once found, the homeland security professional can utilize their gifts and talents for positive effects on the community.

### **C. THE ABUNDANCE OF COMMUNITY AS A COGNITIVE SURPLUS**

Cognitive surplus is a term created to describe the free time that people have on their hands to engage in collaborative activities.<sup>174</sup> This concept is important to understand, in that it is what people have to give and want to give in community, organizations, and business. The wiring of humanity lets people treat free time as a shared global resource, which facilitates the design of new kinds of participation and sharing.<sup>175</sup> Homeland security could benefit from understanding that some people within organizations have gifts and talents that they would give freely. A handful of people, working with cheap tools and little time or money to spare, managed to carve out enough collective goodwill from the community to create a resource that no one could have imagined even five years ago.<sup>176</sup>

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<sup>172</sup> Christensen, Dyer, and Gregersen, *The Innovator's DNA: Mastering the Five Skills of Disruptive Innovators*, 25.

<sup>173</sup> Christensen, Dyer, and Gregersen, *The Innovator's DNA: Mastering the Five Skills of Disruptive Innovators*, 25.

<sup>174</sup> Shirky, *Cognitive Surplus: Creativity and Generosity in a Connected Age*, 27.

<sup>175</sup> Ibid.

<sup>176</sup> Ibid., 17.



Today, people have new freedom to act in concert and in public.<sup>177</sup> One thing that makes the current age remarkable is that it is now possible to treat free time as a general social asset that can be harnessed for large, communally created projects, rather than as a set of individual minutes to be whiled away one person at a time.<sup>178</sup> The connective tissue of the homeland security body is community, community within the enterprise and outside of it.

As has been seen, ordinary citizens are motivated to act on their behalf. The motivation exists; the opportunity to contribute depends on the environment that understands how to harness the talents and gifts of the community. In a world in which opportunity changes little, behavior will change little, but when opportunity changes a lot, behavior will as well, so long as the opportunities appeal to real human motivations.<sup>179</sup> Moreover, this key element of understanding for homeland security professionals is how to take advantage of the opportunities for citizens to give of the cognitive surplus.

Fancy technology is not needed to harness cognitive surplus, but once identified in a way that people care about is discerned, others can replicate the technique, repeatedly, around the world.<sup>180</sup> Homeland security should leave no assets on the table. Recognition of the world's population to volunteer and to contribute and collaborate on large, sometimes global, projects is a powerful asset.

Cognitive surplus is comprised of two things, the world's free time and talents.<sup>181</sup> The world has over a trillion hours a year of free time to commit to shared projects.<sup>182</sup> The same free time existed before digital technology and a sharing economy, but people did not have the tools then, which is the second half of cognitive surplus. People now

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<sup>177</sup> Ibid., 171.

<sup>178</sup> Ibid., 63.

<sup>179</sup> Shirky, *Cognitive Surplus: Creativity and Generosity in a Connected Age*, 17.

<sup>180</sup> Clay Shirky, "Transcript of How Cognitive Surplus Will Change the World," June 2010, TED, [http://www.ted.com/talks/clay\\_shirky\\_how\\_cognitive\\_surplus\\_will\\_change\\_the\\_world?language=en](http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world?language=en).

<sup>181</sup> Ibid.

<sup>182</sup> Ibid.

have digital tools. When marrying a desire to contribute with free time and technology, the results are massive creativity and potential to do good. Homeland security professionals are missing out on this powerful dynamic that does not fit neatly into a linear controlled process.

### **1. Case Study: Ushahidi<sup>183</sup>**

In December 2007, after a difficult and disputed election in Kenya, ethnic violence broke out. Social media began discussing the unrest and the government subsequently imposed a media blackout. As a result, weblogs went from being commentary to an essential avenue of information. One blogger, Ory Okollah, began blogging about the unrest and violence, and also began collecting comments from bloggers about the violence and where it was happening. As comments poured in, it became clear she could not keep up with the number of incoming comments. She said, “there’s too much information about what’s going on in Kenya right now than any one person can manage...if only there was a way to automate this.”<sup>184</sup>

Two programmers read her blog and said “We can help with that,” and 72 hours later, they launched Ushahidi, which mean “witness” or “testimony” in Swahili. This “testimony” from all over Africa came if from the web and mobile phones text messaging, which was then aggregated and placed on a map.

The key is that the information exists in the whole population. Everyone knew where the violence was occurring, but no one person knew what everyone else knew. In addition, this knowledge was the beauty of the cognitive surplus of the citizens in Africa; everyone wanted to contribute and Ushahidi provided the vehicle to do so.

### **2. Observations**

Ushahidi is one of the tools to socialize crisis in near real time. The ability to obtain timely vital information opens up the possibility for analysts to flex and adapt to

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<sup>183</sup> Ibid.

<sup>184</sup> Quote of Ory Okollah in Clay Shirky, “Transcript of How Cognitive Surplus Will Change the World,” June 2010, [http://www.ted.com/talks/clay\\_shirky\\_how\\_cognitive\\_surplus\\_will\\_change\\_the\\_world?language=en](http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world?language=en).

the needs of the crisis and the people involved in it. It allows people involved to be active participants on their own behalf to solve the crisis in their own community, which is a powerful concept.

#### **D. MANY-TO-MANY**

The basic capabilities of tools like Flickr reverse the old order of group activity, which transforms “gather, then share” into “share, then gather.” People were able to connect after discovering one another through their photos.<sup>185</sup> Ridiculously easy group-forming matters because the desire to be part of a group that shares, cooperates, or acts in concert is a basic human instinct that has always been constrained by transaction costs. Now that group-forming has gone from hard to ridiculously easy, an explosion of experiments with new groups and new kinds of groups is being seen.<sup>186</sup>

##### **1. Case Study: Community Empowered Recovery**

When a F3 tornado destroyed parts of Monson, Massachusetts in 2011, two sisters using two laptops and a slow Internet connection created an ad hoc system of matching resources with need and turned their efforts into a business model now called, community powered recovery. Caitria and Morgan O’Neill began their business based on their volunteer cognitive surplus and the skill of one sister who studied hurricanes at Massachusetts Institute of Technology (MIT). Morgan said, “Our operation is massive, and the best, fastest way you can possibly get things you need is tell the Internet, so we did that. With Facebook, we find that we just post what we need, and within half an hour, we’ve got it.”<sup>187</sup>

Baffled by the acute lack of community recovery tools, the sisters decided to build them. They put together a team and built an in-kind resource management system for

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<sup>185</sup> Shirky, *Here Comes Everybody: The Power of Organizing Without Organizations*, 35–36.

<sup>186</sup> Shirky, *Here Comes Everybody: The Power of Organizing Without Organizations*, 54.

<sup>187</sup> Fred Thys, “Social Networking Sites Help Monson Rebuild After Tornado,” WBUR, June 13, 2011, <http://www.wbur.org/2011/06/13/monson-sisters>.



untrained local organizers. Now they work with communities and emergency managers across the country to deploy the system through their company, Recovers.org.<sup>188</sup>

## 2. Case Study: Hurricane Gustav Feeding Efforts

Dr. Jamison Day, who conducted research on fostering coordination without unity of command, shares an interesting story of the feeding efforts during Hurricane Gustav.<sup>189</sup> Evacuees and first responders needed food across 15 Louisiana parishes. The traditional plan used during emergencies by the federal government was to issue meals ready to eat (MRE), meals pre-packaged, and shipped ahead of time. However, by fostering coordination with the local restaurants, the 15 parishes were provided hot meals, culturally appropriate, and at a lower cost than the government. This case demonstrates the many-to-many sharing economy that works on a collaborative shared culture to solve local problems (Figure 2).

**Case Study: Gustav Feeding Efforts**

- Evacuees & first responders across 15 LA parishes needed food
  - Plan: Pre-packaged meals from FEMA
  - Improv decision: Use local restaurants & catering

	<b>Vs.</b>	
\$8.00		\$6.53

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Figure 2. PowerPoint Slide, Fostering Coordination Without Unity of Command, Dr. Jamison Day<sup>190</sup>

<sup>188</sup> Caitria O'Neill, "How Communities Bounce Back from Disaster," *CNN*, September 2, 2012, <http://edition.cnn.com/2012/09/02/opinion/oneill-disaster-recovery/index.html>.

<sup>189</sup> Ibid.

<sup>190</sup> Jamison M. Day, "Fostering Coordination Without Unity of Command" (presentation, Naval Postgraduate School, Capitol Region Campus, Global Border's College, Advanced Training Center, Harper's Ferry, West Virginia), February 17, 2014.

In addition, the parishes in essence were practicing PD because positive deviants are deviant only within the context of their divergence from the norm, in this case, feeding and caring for hungry evacuees. This process excels over most alternatives because PD works best when problems are enmeshed in a complex social system. The problem requires social and behavioral change, and the possible solutions are rife with unforeseeable or unintended consequences.<sup>191</sup>

## **E. PEER-TO-PEER**

This thesis has already noted that the millennial generation, most likely to fill the aging boomer seats at the homeland security planning tables, are digital natives and use a sharing economy mindset. The sharing economy, in part, has a strong peer-to-peer aspect. The peer-to-peer movement, born out of social media, is adding a new dimension to what is called a “sharing economy.” A sharing economy is a socio-economic ecosystem built around the sharing of human and physical resources, including the shared creation, production, distribution, trade, and consumption of goods and services by different people and organizations.<sup>192</sup> In this environment, mutual trade occurs without taxes licenses or regulations and is fully enabled by technology with social feedback mechanisms that grow exponentially.<sup>193</sup>

This decentralized economy is often perceived as a threat to linear, command and control systems, but its power in community is causing a shift in how people interact during community challenges. Ebay, Uber, Lyft, and AirBnB are all examples of a peer-to-peer economy. As another example, the basic capabilities of tools like Flickr reverse the old order of group activity, and transforms “gather, then share” into “share, then gather.” People were able to connect after discovering one another through their photos.<sup>194</sup> Ridiculously easy group-forming matters because the desire to be part of a

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<sup>191</sup> Pascale, Sternin, and Sternin, *The Power of Positive Deviance: How Unlikely Innovators Solve the World's Toughest Problems*, 10.

<sup>192</sup> Benito Matofska, “What Is the Sharing Economy?” accessed November 21, 2014, <http://www.thepeoplewhoshare.com/blog/what-is-the-sharing-economy/.S>.

<sup>193</sup> Eric Blair, “Peer-to-Peer Economy Thrives as Activists Vacate the System,” September 27, 2013, <http://www.activistpost.com/2013/09/peer-to-peer-economy-thrives-as.html>.

<sup>194</sup> Shirky, *Here Comes Everybody: The Power of Organizing Without Organizations*, 34.

group that shares, cooperates, or acts in concert, is a basic human instinct that has always been constrained by transaction costs.

Now that group-forming has gone from hard to ridiculously easy, an explosion of experiments with new groups and new kinds of groups can be seen.<sup>195</sup> In addition, as Buckminster Fuller has said, “you never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”<sup>196</sup>

For homeland security’s biggest challenges, those that are decentralized and complex, utilizing peer-to-peer connections and the *share, then gather* activity is profoundly powerful. Whether it is food, transportation, or shelter during a disaster, mustering the potential of the peer-to-peer model could greatly foster resiliency at the most basic level without any government assistance. Examples can be found in the following case studies regarding food assistance and disaster relief.

### **1. Case Study: Matching Peer-to-Peer Relationships: Casserole**

Future.gov is a British company that uses technology to link peer-to-peer services together for community well-being. Casserole Club helps people share extra portions of home-cooked food with others in their area who might not always be able to cook for themselves. Like a local, community-led takeaway, members serve up meals to their neighbors, and persuade more people to cook fresh food while strengthening local neighborhood relationships with every bite.<sup>197</sup>

What Casserole does in social terms can be best understood in the concept of “groundswell.” A groundswell is a social trend in which people use technologies to obtain the things they need from each other, rather than from traditional institutions like

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<sup>195</sup> “Buckminster Fuller Quotes,” 2014, <http://www.goodreads.com/quotes/13119-you-never-change-things-by-fighting-the-existing-reality-to>.

<sup>196</sup> “FutureGov,” accessed October 7, 2014, <http://wearefuturegov.com/>.

<sup>197</sup> “CrisisCommons,” accessed November 9, 2014. <http://crisiscommons.org/wp-signup.php?new=haiti>.

corporations or government programs.<sup>198</sup> This simple concept had tremendous potential in all types of disasters for food, shelter, transportation, and health supplies.

## **2. Case Study: Crowdsourcing for Disaster Relief**

Mobilizing relief efforts during a disaster can be challenging. Crowdsourcing is one way to utilize peer-to-peer tools to tackle difficult challenges. In the days after the Haiti earthquake, cadres of volunteers from the tech community mobilized in cities across the United States and around the world in what has become known as Crisis Commons.<sup>199</sup> These *ad hoc* gatherings deployed Web 2.0 technologies *en masse* to aid humanitarian relief efforts, but unlike disaster tourists, these volunteers self-organize and stay well out of the way.<sup>200</sup> Using the power of networks and collaborative techniques carefully honed in their day jobs, these assemblies have proven the power of information technology to facilitate co-production both in the technological and socio-political senses.<sup>201</sup> This emergence of the community to solve its own challenges has changed the balance of power for homeland security in that anybody can put up a site that connects people with people.<sup>202</sup>

### **a. Observations**

Crowdsourcing creates digital volunteers. The ability to self-organize digitally around a crisis allows everyone to contribute and be part of the solution to the problem, not merely observers of the problem from afar.

Leveraging the resources of a worldwide network of people through technology is a force-multiplier that demonstrates the community's cognitive surplus and the human-centric desire for cooperative acts. The rapid proliferation of broadband, wireless, and smart phones, coupled with new crowdsourcing technology, is completely changing the

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<sup>198</sup> Charlene Li and Josh Bernoff, *Groundswell* (Cambridge, MA: Harvard Business Publishing Creative Center, Vook, Inc., 2011), Kindle edition, 261–262.

<sup>199</sup> Mark Chubb, “Crowdsourcing Solutions,” Homeland Security Watch, March 17, 2010, <http://www.hlswatch.com/2010/03/17/crowdsourcing-solutions/>.

<sup>200</sup> Ibid.

<sup>201</sup> Ibid.

<sup>202</sup> Li and Bernoff, *Groundswell*, 333.

face of disaster relief. Everyone with a computer can provide crucial assistance by sifting through satellite photos, translating messages or updating maps, and most people are happy to do this free of charge. Contributing to life-saving relief efforts is a powerful motivator.<sup>203</sup>

Homeland security practitioners must recognize that crowdsourcing is about generosity. Imagine matching need with resource for transportation, food, water, shelter, medical supplies, and other necessary resources during time of disaster using crowdsourcing. The key point for homeland security practitioners is to focus on the relationships not the technology. The relationships developed between people are everything. Thus, the emergence of groundswell is the manner in which people connect with each other. The community is thus created, or in regards to the thesis, socially constructed, which determines how the power shifts.<sup>204</sup>

### **3. Case Study: Texas Emergency Management Disability Stakeholder Taskforce**

Katrina drove more than a million people from their homes, probably the largest migration of Americans since the 1930s Dust Bowl.<sup>205</sup> In all, Hurricane Katrina killed nearly 2,000 people and affected some 90,000 square miles of the United States.<sup>206</sup> Hurricane Katrina devastated the lives of many people who lived in the Gulf Coast region. Fortunately, millions of Americans opened their homes and their hearts to hurricane survivors while local, state, and federal government employees worked around the clock to evacuate and rescue people.

Almost immediately after Hurricane Katrina devastated the Gulf Coast, the National Council on Disability (NCD) estimated that roughly 155,000 people with disabilities were over the age of 5—or about 25 percent of the cities' populations—living

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<sup>203</sup> Lukas Biewald and Leila Janah, "Crowdsourcing Disaster Relief," TechCrunch, August 21, 2010, <http://techcrunch.com/2010/08/21/crowdsourcing-disaster-relief/>.

<sup>204</sup> Li and Bernoff, *Groundswell*, 397–399.

<sup>205</sup> Maria Godoy, "Katrina: One Year Later Tracking the Katrina Diaspora: A Tricky Task," National Public Radio, July 25, 2013.

<sup>206</sup> "Hurricane Katrina," accessed October 6, 2013, <http://www.history.com/topics/hurricane-katrina>.



in the three cities hardest hit by the hurricane: Biloxi, Mississippi, Mobile, Alabama, and New Orleans, Louisiana.<sup>207</sup> Emergency managers and government officials were urged to recognize that for hurricane survivors with disabilities, their needs for basic necessities were compounded by chronic health conditions and functional needs, such as, people who are blind, people who are deaf, people who use wheelchairs, canes, walkers, crutches, people with service animals, and people with mental health needs.<sup>208</sup>

Hurricanes Katrina and Rita disproportionately affected people with disabilities because their needs were often overlooked or completely disregarded. Their evacuation, shelter, and recovery experiences differed vastly from the experiences of people without disabilities. People with disabilities were often unable to evacuate because transportation was inaccessible without wheelchair lifts. Moreover, people with visual and hearing disabilities were unable to obtain necessary information pertinent to their safety since public communication did not comply with federal law.<sup>209</sup>

It is difficult to determine precisely what percentage of hurricane-related deaths were people with disabilities. However, it is clear that a disproportionate number of the fatalities were people with disabilities. One statistic from the American Association of Retired Persons (AARP) provides some insight into the extent, “73 percent of Hurricane Katrina-related deaths in New Orleans area were among persons age 60 and over, although they comprised only 15 percent of the population in New Orleans.”<sup>210</sup> Most of those individuals had medical conditions and functional or sensory disabilities that made them more vulnerable. Adding to desperate circumstances was Hurricane Rita that also struck in the same region less than a month after Hurricane Katrina.

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<sup>207</sup> “Hurricane Katrina Affected Areas,” September 2, 2005, <http://www.ncd.gov/newsroom/publications/2005/katrina2.htm>.

<sup>208</sup> Ibid.

<sup>209</sup> National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges* (Washington, DC: National Council on Disability, 2006).

<sup>210</sup> Mary Jo Gibson with Michele Hayunga, “We Can Do Better: Lessons Learned for Protecting Older Persons in Disasters,” AARP, 2006, <http://assets.aarp.org/rgcenter/il/better.pdf>.

Many states took in the evacuees, including Texas. They came by the tens of thousands, forced from homes by a wall of water and rescued from the horrors of mass shelters after days of suffering. Many evacuees had no choice in whether or where they went, and Houstonians had no choice, for humanity's sake, but to take them in.<sup>211</sup> According to a National Public Radio (NPR) report, so many evacuees came to Texas and stayed that Texas undertook its own accounting. A year after the storm, 251,000 were still in Texas, including 111,000 in Houston, 66,000 in Dallas-Fort Worth, and 62,000 in Austin-San Antonio, according to a 2006 survey by the Texas Health and Human Services Commission.<sup>212</sup> A national survey by the Appleseed Foundation, a non-profit legal network, found that many of the evacuees in Houston were bused there from the New Orleans Superdome, and lacked the means to evacuate on their own.<sup>213</sup> A similarly underprivileged population made its way to San Antonio. Nearly half of the evacuees had a household member with a chronic illness. Many continue to experience mental trauma from the storm. Across the Lone Star State, 41 percent of evacuees have household incomes of less than \$500 a month.<sup>214</sup>

The Texas Governor's Committee on People with Disabilities (GCPD) and the Texas Division of Emergency Management (TDEM) felt that a taskforce should be convened to discuss preparedness and planning for people with disabilities and those with access and functional needs. Hurricanes Katrina and Rita clarified the need for a multi-organizational collaborative process based on the strained response capabilities for mass care and sheltering following Katrina and Rita. GCPD and TDEM sought to bring together community stakeholders to create a functional support services taskforce (FNSS Taskforce) to examine issues related to people with disabilities and those with access and functional needs. GCPD brought together 25 individuals from state, local, federal,

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<sup>211</sup> Hamilton Reeve, "The Huddled Masses," *The Texas Tribune*, August 30, 2010, <http://www.texastribune.org/2010/08/30/five-years-houstonians-conflicted-about-katrina/>.

<sup>212</sup> Texas Health and Human Services Commission, *Hurricane Katrina Evacuees in Texas* (Austin, TX: Texas Health and Human Services Commission, 2006).

<sup>213</sup> Appleseed Foundation, *A Continuing Storm: The On-Going Needs of Hurricane Katrina Evacuees* (Washington, DC: Appleseed Foundation, 2006).

<sup>214</sup> Godoy, "Katrina: One Year Later Tracking the Katrina Diaspora: A Tricky Task."

university, and public non-profit agencies, including seven individuals from the disability community who represented people who are deaf, blind, or mobility impaired.

The State of Texas sought to develop a process to negotiate solutions to problems evidenced in Hurricanes Katrina and Rita. The following points from a collaborative organizational view describe the strategic process of the taskforce. The collaborative effort consisted of doing the following.

- Foster an emergent process between community members who could negotiate the answers or solutions to shared concerns or problems<sup>215</sup>
- Work in association with others for the mutual benefit of the participating parties
- Establish joint activities through which stakeholders could work together on the end product
- Facilitate an environment for multi-organizational stakeholders to solve problems that could not be solved or easily resolved by a single person or organization<sup>216</sup>

**a. *Social Capital***

The phrase “lateral thinking” is used to describe creativity that stems from taking knowledge from one substantive context or discipline and applying it to an entirely different one. For example, Leonardo da Vinci’s genius stemmed from his mastery of lateral thinking. He moved fluidly from art to science, engineering, mathematics, medicine, architecture, and beyond, and found universal rules of nature manifest in widely varying contexts.<sup>217</sup> “Think DaVinci” is important for any collaborator to remember because in an ideal world, the primary reason to collaborate is people think they can create something better than if they did it themselves. This concept was particularly true for the taskforce. Just like DaVinci, the taskforce needed the cognitive

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<sup>215</sup> Susan Page Hovevar, Erik Jansen, and Gail Fann Thomas, “Inter-Organizational Collaboration: Addressing the Challenge,” 10 Years After: The 9/11 Essays, *Homeland Security Affairs* 7, September 2011.

<sup>216</sup> Rosemary O’Leary and Nidhi Vij, “*Collaborative Public Management: Where Are We and Where Are We Going?*” (Syracuse, NY: The Maxwell School of Syracuse University, 2012).

<sup>217</sup> Alan Riding, “Glimpses of a Genius Who Blazed His Paper Trail,” *The New York Times*, September 25, 2006, [http://www.nytimes.com/2006/09/26/arts/design/26leon.html?\\_r=0](http://www.nytimes.com/2006/09/26/arts/design/26leon.html?_r=0).

surplus, which it was ready to give, from the community of stakeholders, including people with disabilities as equal planning partners to build on each other's strength to create the functional needs support services (FNSS) toolkit and form the disability emergency management taskforce.

Social and professional relationships were built among the taskforce participants. Opportunities were available to examine how services, programs, or resources overlapped, and how the taskforce would leverage and streamline those resources in a disaster. The subject matter experts with disabilities were able to bring significant insight to the taskforce in areas, such as effective communications, sheltering, and repatriation.

***b. Observations***

Since people with disabilities and those with access and functional needs were included in the taskforce, many emergency managers gained a unique perspective on the skills, expertise, and knowledge of disability related issues in disasters and came to see people with disabilities as the subject matter experts. This mutual respect fostered shared decision making that eventually led to a top-notch collaboration for first responders and sheltering personnel. No longer were people with disabilities considered part of the problem; they were actively included as part of the solution and considered valued subject matter experts. Texas went to zero participation to a successful taskforce that now has six subgroups all working collaboratively to help solve problems. This one case study not only demonstrated AI, which sought to get to the positive core of community, but also took advantage of the cognitive surplus of the disability community.

**F. CONCLUSION**

In summary, a paradigm shift is occurring through emerging technologies and adaptive systems that can provide some insight into the nation's future resilience. The homeland security enterprise has become so locked within a problem-centered, critique-driven worldview that it has severely limited its potential for innovation and

transformation.<sup>218</sup> This future homeland security narrative could be strengthened by utilizing an AI framework that examines the nation's strengths and assets. This approach is a shift from a deficient and lessons learned discourse to an AI discourse that means pivoting from looking backwards at mistakes to being proactive and building a system of resiliency for the future. This shift of focus from programs to complex and adaptive systems is fostered by new ways of communication in interactions in agencies and communities.

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<sup>218</sup> Barrett and Fry, *Appreciative Inquiry—A Positive Approach to Building Cooperative Capacity*, 420–421.

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## IV. COMMUNICATION AND NETWORKS

Language matters—words become commitments and commitments generate behavior.

~ Freedom from Frenzy, Fast Company

Communication can be used to foster collaboration or to divide. An examination of the language people use and the social networks in which they communicate are important. Communications tools are now available that are flexible enough to match the social capabilities, and this nation is witnessing the rise of new ways of coordinating action that takes advantage of this change.

The United States is living in the middle of a remarkable increase in its ability to share, cooperate with one another, and take collective action, all outside the framework of traditional institutions and organizations.<sup>219</sup> New and continuing evolving communication tools for interaction provide the capability for collaborative action by loosely structured groups, without managerial direction, outside of government and the profit motive.<sup>220</sup> On the surface, it might be surmised that the challenge for homeland security is to do social media better but the substantive challenge is to make organizations within and outside of homeland security more human.<sup>221</sup>

Homeland security practitioners must navigate this environment and match these communication tools with language that is plain and understandable by the general public. Malcolm Gladwell calls this the “stickiness factor,” or changes in language specific to making a message contagious.<sup>222</sup> The stickiness factor says that specific ways exist to make a contagious message memorable. Relatively simple changes in the presentation and structuring of information can make a big difference in how much of an

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<sup>219</sup> Shirky, *Here Comes Everybody: The Power of Organizing without Organizations*, 20–21.

<sup>220</sup> *Ibid.*, 47.

<sup>221</sup> Jamie Notter and Maddie Grant, *Humanize: How People-Centric Organizations Succeed in a Social World* (Upper Saddle River, NJ: Pearson Education, 2011), Kindle edition, 4.

<sup>222</sup> Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference*, 25.

impact it makes.<sup>223</sup> The paradox of the epidemic is that to create one contagious movement, it is often necessary to create many small movements first.<sup>224</sup>

Homeland security practitioners at all levels of government have attempted to create impactful messaging that “catches on,” but the hard part is how to socially construct messaging that does not go in one ear and out the other.<sup>225</sup> The homeland security enterprise has held information close to its chest as closely guarded secrets, which are seldom shared with the public. Homeland security’s current messaging is constructed around orders and commands; “Be Informed, Make a Plan, Build a Kit, Get Involved, See Something, Say Something.” The alternative messaging could be invitational, confident in the skills and commitment of the American people, for example, “When it comes to your family and those you love, who will be the hero?” “We invite you to the security conversation, your input is valued and appreciated, will you join us?” Moreover, then stay true to the invitation to truly invite people into the homeland security discourse. In this regard, America needs a do ask, do tell policy; ask more of citizens and tell citizens more.

#### **A. COMMUNICATION**

The power of language is transformational. A new social construction of homeland security will require a change in the language used to be more inclusive and welcoming to the community, to both internal and external customers. Many in homeland security have focused for years on improving conversations. It has been known that dialogue and communication are important tools for improvement and engagement, and some believe that all transformation is linguistic. A good way to shift transformation may be in the manner in which language is used to unite or divide. If the desire is to effect a change in culture, for example, the tone of the conversation should change, or, more precisely, to have a conversation that has not been held before, one that has the power to

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<sup>223</sup> Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference*, 25.

<sup>224</sup> *Ibid.*, 192.

<sup>225</sup> *Ibid.*, 24–25.



create something new in the world.<sup>226</sup> This insight forces people to question the value of their stories, the positions taken, their love of the past, and their way of being in the world.<sup>227</sup> It also invites them to have a conversation with the American people using plain language, language that is simple and easy to understand.

The important insight for the homeland security practitioner is that even subtle changes in words used in communication are important to keep in mind. The words, “survivor” and “victim” were often used interchangeably during Hurricane Katrina and during the attacks on the World Trade Center but the meaning carries a different message. The word “survivor” speaks to resiliency and hope, and the word “victim” speaks to helplessness and doom. Over the long haul of time, the subtlety of language has powerful results, and is an important part of the construction of a homeland security ecosystem more about resiliency than helplessness.

In 1998, President Clinton revived plain language as a major government initiative. Clinton issued a presidential memorandum that formalized the requirement for federal employees to write in plain language by requiring all new regulations to be written clearly by January 1, 1999.<sup>228</sup> He wrote, “By using plain language, we send a clear message about what the government is doing, what it requires, and what services it offers.... “Plain language documents have logical organization; common, everyday words, except for necessary technical terms; ‘you’ and other pronouns; the active voice; and short sentences.”<sup>229</sup> Arthur Levitt, former Chairman of the Securities and Exchange Commission (SEC), was a champion of plain language and realized how critical it is for financial documents. The SEC handbook remains an excellent resource on plain language writing.<sup>230</sup> Warren Buffett, a friend of Levitt’s, summed up plain language marvelously in this “writing tip” in the introduction to the 1998 SEC Plain English Handbook. “Write

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<sup>226</sup> Block, *Community: The Structure of Belonging*, 15.

<sup>227</sup> Ibid.

<sup>228</sup> Locke, “A History of Plain Language in the United States Government.”

<sup>229</sup> Ibid.

<sup>230</sup> Ibid.

with a specific person in mind. When writing the Berkshire Hathaway annual report, I picture my sisters, highly intelligent, but not experts in accounting or finance.”<sup>231</sup>

In short, the use of plain language is an attempt to construct information socially for the public that facilitates inclusion into the conversation. When it comes proactively to socially constructing language in homeland security, the goal is to design, not engineer, discover, not dictate, decipher, not presuppose.<sup>232</sup> Understanding this dynamic will not only help foster engagement and cooperation in non-disaster times, but also during active disaster through warnings and alerts. The best warnings and alerts are like the best ads: consistent, easily understood, specific, frequently repeated, personal, accurate, and targeted.<sup>233</sup> In this context, language and effective communication is paramount in disasters and effective alerts display similar traits.

Effective warnings and alerts contains five elements of communication.

- The communicator is a highly credible and trusted source
- The language used is clear, plain, accessible and understandable, free from legal verbiage and government acronyms. It is plain language.
- The message is focused on a specific event
- The alert is designed to motivate citizens to act
- The alert calls for a concrete set of actions<sup>234</sup>

Often poorly worded and vague warnings only enhance self-serving bureaucratic interests. The intricacies of language, and how it affects people, has been studied by social psychologists and led to insights. One example is related to the use of “people-first language” used in the field of disability. People first language simply means you identify the person first, as human beings before their disability. Words matter. Over time, the words individuals use to describe people and their interactions with each other have the

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<sup>231</sup> Locke, “A History of Plain Language in the United States Government.”

<sup>232</sup> Richard Pascale, Mark Millemann, and Linda Gioja, *Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business* (New York: Crown Publishing Group, 2001), Kindle edition, 2642–2643.

<sup>233</sup> Ripley, *The Unthinkable: Who Survives When Disaster Strikes—and Why*, 49.

<sup>234</sup> Bruce Bongar et al., *The Psychology of Terrorism* (Oxford, England: Oxford University Press, 2008), 357.

power to craft this nation's culture. In the following case study, the power words and the power of asking are shown. Changing one word can have a profound impact on messaging and the subsequent community response.

### 1. Case Study: Ellen Langer—If You Want People to Take Action: Give a Reason

Social psychologist Ellen Langer tested the power of a single word in an experiment in which she asked to cut in line at a copy machine. She tried three different ways of asking.

- “Excuse me, I have five pages. May I use the Xerox machine?” —60% said OK
- “Excuse me, I have five pages. May I use the Xerox machine **because** I’m in a rush?” —94% said OK
- “Excuse me, I have five pages. May I use the Xerox machine **because** I have to make some copies?” —93% said OK

Even though Langer’s requests are simple, it did not matter. The trigger word “because” was all she needed. The takeaway, when you want people to take action, always give a reason.<sup>235</sup> In Robert Calidini’s book, *Influence*, he noted that according to “a well-known principle of human behavior, when we ask someone to do us a favor we will be more successful if we provide a reason. People simply like to have reasons for what they do.”<sup>236</sup> Homeland security professionals should note when public input and action is needed; asking for it and giving a reason for it are part of the success of getting it.

Every community, through its language, cultural diversity, and local actions socially constructs its environment. It is in this context that the homeland security enterprise can use social network analysis of existing social networks of a community to leverage the strengths of the community. For example, from a psychological and sociological perspective, the public’s response to 9/11 followed a pattern of group

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<sup>235</sup> Keevan Lee, “The Big List of 189 Words That Convert,” Buffer Social, accessed August 19, 2014, <https://blog.bufferapp.com/words-and-phrases-that-convert-ultimate-list>.

<sup>236</sup> Robert B. Cialdini, *Influence: The Psychology of Persuasion* (New York: Collins, 2007).

behavior that warrants the close attention of leaders at all levels because it reveals an opportunity bubble, a promising, yet fleeting, opportunity to shape the course of subsequent events.<sup>237</sup> In this context, alerts and warnings to the American public are also important. The best warnings and alerts are like the best ads: consistent, easily understood, specific, frequently repeated, personal, accurate, and targeted.<sup>238</sup> Language and effective communication is paramount in disasters and effective alerts display similar traits.

## **2. Recommendations**

The following recommendations apply to communications in homeland security.

- Create messaging for public consumption that uses the principles of plain language by employing an AI strategy.
- With an understanding of the period of time immediately following a disaster called the “opportunity bubble,” call on the American people to make collective personal and community sacrifices for volunteering and coming to the aid of their respective communities.
- Create effective warnings and alerts contain five elements of communication.
  - The communicator of the alert or warning is a highly credible and trusted source.
  - The language used in alerts and warnings is clear, plain, accessible and understandable, free from legal verbiage and government acronyms. It is plain language.
  - The alert or warning message is focused on a specific event.
  - The alert or warning is designed to motivate citizens to act
  - The alert calls for concrete, specific, and an understandable set of actions.<sup>239</sup>

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<sup>237</sup> Fathali M. Moghaddam and James N. Breckenridge, “The Post-Tragedy Opportunity Bubble and the Prospect of Citizen Engagement,” 10 Years After: The 9/11 Essays, *Homeland Security Affairs* 7 September 2011, 1.

<sup>238</sup> Ripley, *The Unthinkable: Who Survives When Disaster Strikes—and Why*, 49.

<sup>239</sup> Adapted from Bongar et al., *The Psychology of Terrorism*, 357.

## B. NETWORKS

One of the reasons social media has grown so fast is that it taps into what people, as human beings, naturally love and need and want to do: create, share, connect, and relate.<sup>240</sup> Humans have the ability to self-organize. Technology in general, and especially social technology, can shift relationships and disrupt traditional power structures. Social technology has brought an awareness of how networks form in social groups and that they are powerful influencers of human behavior in many ways.

According to Fass in his book, *Next Generation Homeland Security*, America cannot be returned to an agrarian democracy or the industrial age. However, a classical American bottom-up resilience for the information age can be restored. The information age is about networks. Networks empower people. A nation with a self-reliant, empowered citizenry makes not for a single point of failure but rather fosters a competitive advantage and continued global engagement.<sup>241</sup>

To put this proposition in very personal, American terms, if the homeland security enterprise had understood social networks, it may have been quite possible to connect the dots to prevent 9/11. One management consultant, Valdis Krebs, scoured newspaper reports to build up a social network of the 19 terrorists that he could begin to analyze. Within weeks, his network began to create a visual and mathematical picture of the links between the terrorists.<sup>242</sup>

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<sup>240</sup> Notter and Grant, *Humanize: How People-Centric Organizations Succeed in a Social World*, 3.

<sup>241</sup> Morton, *Next-generation Homeland Security: Network Federalism and the Course to National Preparedness*.

<sup>242</sup> “6 Degrees + 1 Game Theory = Social Network Analysis,” accessed November 15, 2014, [http://inventorspot.com/articles/6\\_degrees\\_1\\_game\\_theory\\_social\\_network\\_analysis\\_31847](http://inventorspot.com/articles/6_degrees_1_game_theory_social_network_analysis_31847).

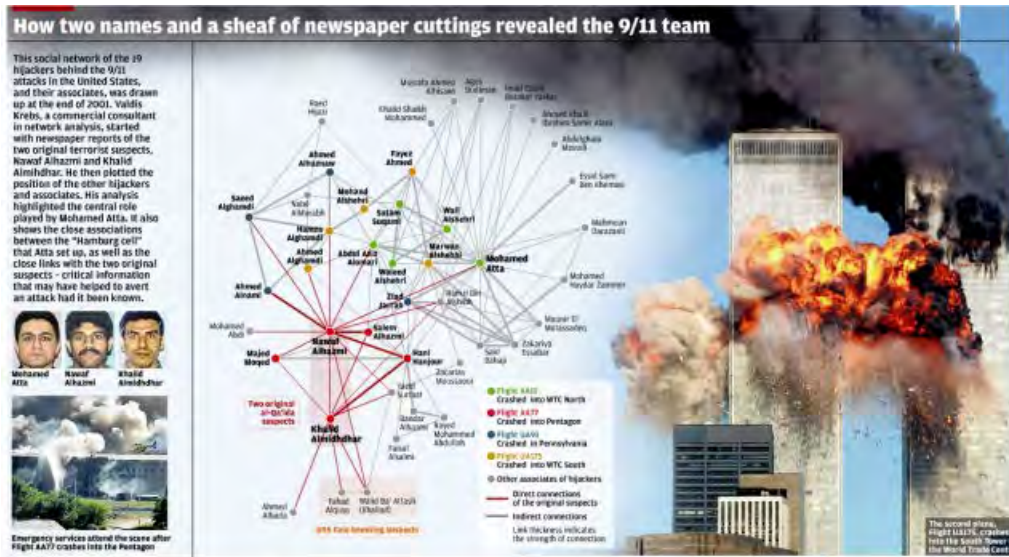


Figure 3. Vladis Krebs, Social Network Analysis, 9/11 Terrorist Team<sup>243</sup>

The same kinds of understanding network dynamics for destruction can be used to understand network dynamics for community strengths and resiliency.

## 1. Social Networks That Build on Strengths, Not Deficiencies

Social networks have the capacity to build on connected collaborations for resiliency and community survival. To do so, a focus on the strengths of a community instead of its deficits is important. Communities are built from the assets and gifts of their citizens, not from the citizens' needs or deficiencies. Organized, professionalized systems are capable of delivering services, but only associational life is capable of delivering care. Sustainable transformation is constructed in those places in which citizens choose to come together to produce a desired future.<sup>244</sup> Choosing to come together creates the social fabric of community forming an expanding shared sense of belonging. It is shaped by the idea that only when people are connected and care for the well-being of the whole community that a civil and democratic society is created.<sup>245</sup>

<sup>243</sup> Vladis E. Krebs, "Uncloaking Terrorist Networks," *First Monday*, 7 no. 4 (April 1, 2002), <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/941/>.

<sup>244</sup> Block, *Community: The Structure of Belonging*, 14.

<sup>245</sup> *Ibid.*, 9.

The traditional human orientation to neighborhood and village-based groups is moving towards communities oriented around geographically dispersed social networks. People communicate and maneuver in these networks rather than being bound up in one community.<sup>246</sup> In November 2010, the Pew Research Center examined social networking sites (SNS) in a survey that explored people's overall social networks and how use of these technologies is related to trust, tolerance, social support, community, and political engagement. They found that social networking sites are increasingly used to keep up with close social ties and that the average user has more close ties and is half as likely to be socially isolated than the average American.<sup>247</sup> Using data from social networking, social network analysis has emerged as a novel way of mapping the interconnectedness of communities, individuals, programs, and services.

As has been said, but worth repeating, a social network is a powerful human system. The system has the potential to provide and affect the way people act and communicate. The ability of members from certain communities to bounce back from adversity is also aided by high-functioning social networks, friends, family, religious, and community organizations, satisfying jobs, and access to government support and resources.<sup>248</sup> Social networks have a profound ability to influence the thinking and behavior of people within the networks. As an example, a case study related to obesity points to the discovery that a social network has profound influences upon the people in the network.

## **2. Self-Organizing Systems**

The concept of self-organization first appeared in the 1940s and 1950s when cybernetics scientists started exploring neural networks. Self-organization is the capacity of a system to self-organize themselves spontaneously into greater states of

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<sup>246</sup> Boase et al., *The Strength of Internet Ties*.

<sup>247</sup> Keith N. Hampton et al., "Social Networking Sites and Our Lives," Pew Research Center, June 16, 2011, <http://www.pewinternet.org/2011/06/16/social-networking-sites-and-our-lives/>.

<sup>248</sup> Zolli and Healy, *Resilience: Why Things Bounce Back*, 129.

complexity.<sup>249</sup> Entities of a complex system interact locally among themselves, which leads to the reshaping and renewal of the system as a whole. For example, a flock of birds spontaneously reshape its flock in response to changes in wind or while foraging or for protection from prey. Social ants, herds of cattle, termites, and bees all display this phenomenon of self-organization.

Human beings also self-organize into groups, communities, civilizations, and economies as a response to collective needs. Examples include neighbors after the 2014 Atlanta snowstorm providing food and shelter to those stranded, and in West Virginia during the chemical leak spill into the Elk River where the community organized to provide water to the community. Self-organizing systems are resiliency in action. The ability of people to self-organize without a unity of a command structure is a powerful human construct. Not only because it happens without any outside entity directing it, but it gets people to act on their own behalf and on the behalf of others. As a general rule, people are much more likely to act their way into a new way of thinking than to think their way into a new way of acting.<sup>250</sup>

Key features of self-organizing systems include the following.

- Self-organization occurs spontaneously
- The constituent entities are unconscious to the process
- No external strategic guidance is available for the process
- The organization is essentially an open system exchanging energy and matter with its environment and is capable of survival even away from states of equilibrium<sup>251</sup>

Part of understanding social complexity is looking at self-organizing human systems, which are connected to complex adaptive systems. Complex adaptive systems are self-organizing, but they differ from other self-organizing systems in that they learn to

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<sup>249</sup> Elizabeth McMillan, *Complexity, Organizations and Change* (London and New York: Routledge, 2004).

<sup>250</sup> Pascale, Milleman, and Gioja, *Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business*, 275–276.

<sup>251</sup> Gupta and Anish, “Insights from Complexity Theory: Understanding Organizations Better.”



adapt to changes in their environment. A complex adaptive system is formally defined as a system of independent agents that can act in parallel, develop “models” as to how things work in their environment, and, most importantly, refine those models through learning and adaptation.<sup>252</sup> Examples of complex adaptive systems are telecommunications systems, healthcare, the Internet, biological systems, and social networks. It is helpful to study complex adaptive systems by using three approaches.

- Study how interactions give rise to patterns of behavior
- Understand the ways to describe complex systems
- Evaluate complex systems through pattern formation and their evolution<sup>253</sup>

In regards to homeland security strategy, a process that studies and incorporates these approaches of complex adaptive systems is one that recognizes and manages systemic patterns—rather than focusing on programs—would benefit homeland security.<sup>254</sup> The homeland security enterprise must recalibrate to take advantage of these self-organizing systems. The emphasis placed on improving command and control should instead be focused on creating a new, alternative homeland security approach capitalizing on a combination of new communications technology and the science of social networks and “swarm intelligence” fundamentally better matched to the circumstances encountered in disasters.<sup>255</sup> The hallmarks of such a strategy would be flexibility, ease of incorporating situational awareness into decision making, and the ability of anyone available after a catastrophe to create ad hoc strategies with available resources.<sup>256</sup>

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<sup>252</sup> Gell-Mann, *The Quark and the Jaguar*, 16–24; also, Waldrop, *supra* note 2, 294–299.

<sup>253</sup> Jay Forrester, “Counterintuitive Behavior of Social Systems,” *Technology Review*, no. 73 (1971): 52.

<sup>254</sup> Christopher Bellavita, “Changing Homeland Security: Shape Patterns, Not Programs—Volume II no. 3, *Homeland Security Affairs*, 1, October 3, 2006, <http://www.hsaj.org/?article=2.3.5>.

<sup>255</sup> Stephenson and Bonabeau, “Expecting the Unexpected: The Need for a Networked Terrorism and Disaster Response Strategy.”

<sup>256</sup> *Ibid.*, 1.

### 3. Social Network Analysis

A systematic study of networks called, social network analysis (SNA), can be used to identify and study the characteristics and functions of trusted leaders, organizations, and information sources within networks. By understanding how leaders and organizations emerge within the computer-network environment under different circumstances, and understanding the characteristics that allow them to become trusted, emergency management practitioners could more effectively engage leaders and organizations in improving community resilience.<sup>257</sup>

#### a. History of Social Network Analysis

The history of SNA began in the fall of 1932, when an epidemic of runaways occurred at the Hudson School for Girls in upstate New York. In a period of just two weeks, 14 girls ran away, a rate 30 times higher than the norm. Jacob Moreno, a psychiatrist, suggested the reason for the spate of runaways had less to do with individual factors pertaining to the girls' personalities and motivations than with the positions of the runaways in an underlying social network.<sup>258</sup> Moreno and his collaborator, Helen Jennings, mapped the social network at Hudson using "sociometry," a technique for eliciting and graphically representing individuals' subjective feelings towards one another. By examining the links in this social network, Moreno and Jennings argued that channels for the flow of social influence and ideas existed among the girls.

In a way that even the girls themselves may not have been conscious of, it was their location in the social network that determined whether and when they ran away. In the sociogram displayed (Figure 4), Moreno and Jennings drew out the network of runaways. The four largest circles (C12, C10, C5, C3) represent cottages in which the girls lived. Each of the circles within the cottages represents individual girls by their

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<sup>257</sup> Magsino, *Applications of Social Network Analysis for Building Community Disaster Resilience: Workshop Summary*, 1426–1430.

<sup>258</sup> Linton C. Freeman, *The Development of Social Network Analysis: A Study in the Sociology of Science* (Vancouver: Empirical Press, 2004).

initials. All non-directed lines between a pair of individuals represent feelings of mutual attraction. Directed lines represent one-way feelings of attraction.<sup>259</sup>

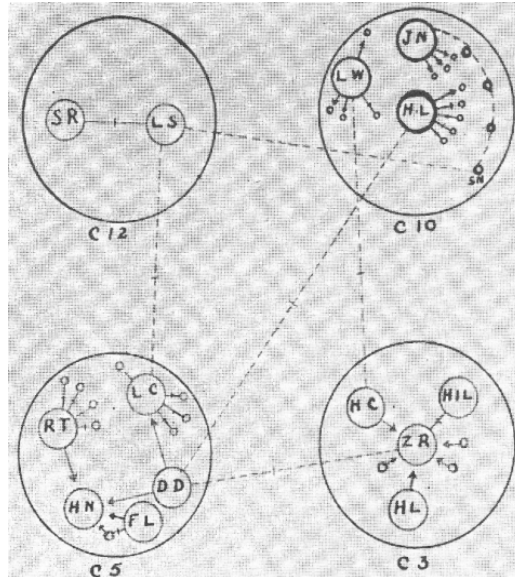


Figure 4. Sociogram, Jacob Moreno, Hudson Girls School, 1932<sup>260</sup>

In the 1940s and 1950s, social network analysis advanced under several fronts, most notably under the leadership of Alex Bavelas, a team of researchers at the Group Networks Laboratory at MIT that began studying the effects of different communication network structures on the ability of groups to solve problems.<sup>261</sup>

The work done by Bavelas and his colleagues at MIT captured the imagination of researchers in a number of fields, including psychology, political science, and economics. In the 1950s, Kochen, a mathematician, and de Sola Pool, a political scientist, wrote a highly circulated paper, eventually published in 1978,<sup>262</sup> which tackled what is known

<sup>259</sup> Jacob L. Moreno, *Who Shall Survive?* (Washington, DC: Nervous and Mental Disease Publishing Company, 1934).

<sup>260</sup> "Referral Patterns & Spheres of Influence, Building Sociograms," accessed December 5, 2014, <http://www.referralpattern.com/4.html>.

<sup>261</sup> Alex Bavelas, "Communication Patterns in Task-Oriented Groups," *Journal of Acoustical Soc. America* 22 (1950): 725–730.

<sup>262</sup> Ithiel de Sola Pool and Manjked Kochen, "Contacts and Influence," *Social Networks* 1, no. 1 (1978): 5–51.

today as the “small world” problem. They asked the question: If two persons are selected at random from a population, what were the chances that they would know each other, and, more generally, how long a chain of acquaintanceship would be required to link them? On the basis of mathematical models, they speculated that in a population like the United States, at least 50% of pairs could be linked with no more than two intermediaries. Twenty years later, Stanley Milgram tested their propositions empirically, which led to the now popular notion of “six degrees of separation.”<sup>263</sup>

By the 1970s and 1980s, social network analysis had become an established field within the social sciences, with a professional organization International Network of Social Network Analysis (INSNA), an annual conference SUNBELT Conference on Social Network Analysis (SUNBELT), specialized software (e.g., University of Network Integrated Telematics Services (UCINET)) and its own journal (*Social Networks*). In the 1990s, network analysis radiated into a great number of fields, including physics and biology. It also made its way into several applied fields, such as management consulting,<sup>264</sup> public health,<sup>265</sup> and crime/war fighting.<sup>266</sup> In management consulting, network analysis is often applied in the context of knowledge management, in which the objective is to help organizations better exploit the knowledge and capabilities distributed across its members. In public health, network approaches have been important both in stopping the spread of infectious diseases and in providing better health care, social support, and building group cohesiveness.

#### ***b. Social Network Analysis and the National Security Today***

Over the last few years, an explosion of activity related to social network analysis has occurred. It has been used to look at a variety of issues, such as business practices, transportation, education, healthcare, and homeland security and defense. Social network

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<sup>263</sup> Stanley Milgram, *Psychology Today* 2 (1967): 60.

<sup>264</sup> Robert Cross and Andrew Parker, *The Hidden Power of Social Networks* (Boston, MA: Harvard Business School Press, 2004).

<sup>265</sup> Jay A. Levy and Bernice A. Pescosolido, *Social Networks and Health* (Amsterdam, Holland: Elsevier, 2002).

<sup>266</sup> Marc Sageman, *Understanding Terror Networks* (Philadelphia: University of Pennsylvania Press, 2004).

analysis grew from its initial application in education to be one of the most powerful tools for examining the social dynamics of networks. One of the most potent ideas in the social sciences is the notion that individuals are embedded in thick webs of social relations and interactions. Social network theory provides an answer to a question that has preoccupied social philosophy since the time of Plato; namely, the problem of social order, how autonomous individuals can combine to create enduring, functioning societies.<sup>267</sup> In those groups, the contacts and influences with and among individuals have powerful consequences that often influence behavior.

Historically, social network analysis was used to understand the social influence of individuals upon each other, which has the potential to change the social system and subsequent behavior. A model for an effective alternative to command-and-control in disasters or terrorist attacks is found in a 1996 study for the DOD, *The Advent of Netwar*.<sup>268</sup> In it, John Arquilla and David Ronfeldt describe the rise of networked enemies “[who are] organized along networked lines or employ networks for operational control and other communications.”<sup>269</sup> They claim the information revolution encourages this shift. Arquilla and Ronfeldt argue this new type of enemy requires rethinking U.S. defense strategy because it gives small groups who communicate, coordinate, and conduct their campaigns in a networked manner, without a precise central command, an advantage over hierarchical opponents.<sup>270</sup>

Logically, fighting a networked enemy requires the United States to form networks to fight networks by decentralizing operational decision-making authority. The network concept also applies to community resiliency in that communities are interconnected with critical people (links) and organizations (nodes), and link themselves to a social network. Understanding social networks has a myriad of uses from understanding terrorist networks to understanding community networks. Social network

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<sup>267</sup> Stephen Borgatti et al., “Network Analysis in the Social Sciences,” *Science* 13 (2009): 892–895.

<sup>268</sup> John Arquilla and David Ronfeldt, *The Advent of Netwar* (Santa Monica, CA: RAND Corporation, 1996).

<sup>269</sup> *Ibid.*, 1.

<sup>270</sup> *Ibid.*, 82.

analysis's history is a humble one of understanding the connections of young schoolgirls and the link between runaway behavior, however its use today holds powerful insight for the homeland security enterprise.

### **C. COHESIVE GROUP SOCIOLOGY: “CONTACTS AND INFLUENCES” AND SOCIAL NETWORKS**

The notion of group cohesion is foundational in sociology. Early sociologists talked about little else. Their work provided an intuitive “feel” for groups, but it did not define groups in any systematic way. When the social network perspective emerged, however, network analysts set out to specify groups in structural terms.<sup>271</sup> Freeman and Webster<sup>272</sup> described the observation behind this structural perspective on groups.

[W]henever human association is examined, we see what can be described as thick spots—relatively unchanging clusters or collections of individuals who are linked by frequent interaction and often by sentimental ties. These are surrounded by thin areas—where interaction does occur, but tends to be less frequent and to involve very little if any sentiment.<sup>273</sup>

An early social network analyst, George Homans, spelled out the intuitive basis for the social network conception of cohesive groups by defining the interactions of its members.<sup>274</sup> An article written by Watts and Strogatz<sup>275</sup> in 1998 addressed a standard topic in social network analysis, called the “small world.” Concern with that issue stemmed from one of the classic social network papers, “Contacts and Influence,” written by Ithiel de Sola Pool and Manfred Kochen in the mid-1950s.<sup>276</sup>

The questions raised by Pool and Kochen concerned patterns of acquaintanceship linking pairs of persons. They speculated that a chain of acquaintanceships involving no

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<sup>271</sup> Linton C. Freeman, *The Development of Social Network Analysis—With an Emphasis on Recent Events* (Irvine, CA: University of California-Irvine 2004).

<sup>272</sup> Linton C. Freeman and Cynthia M. Webster, “Interpersonal Proximity in Social and Cognitive Space,” *Social Cognition*, 12 (1994): 223–247.

<sup>273</sup> *Ibid.*

<sup>274</sup> George C. Homans, *The Human Group* (New York, Harcourt, Brace and Company, 1950), 84.

<sup>275</sup> Duncan J. Watts and Steven H. Strogatz, “Collective Dynamics of ‘Small-World,’” *Networks Nature* 393, no. 6684 (1998): 440–442.

<sup>276</sup> Pool and Kochen, “Contacts and Influence,” 5–51.

more than seven intermediaries links any two people in the United States. Various students picked up on Pool and Kochen's ideas, including Stanley Milgram who used them as the basis for his doctoral dissertation on the "small world." Milgram published several papers on the subject, one of which one was a popularization that appeared in *Psychology Today* in 1976.<sup>277</sup> In these kinds of scenarios, individuals can be influenced by the egos and social mores of the group and individuals within the group.

### **1. Links and Nodes or People and Organizations**

Perhaps the most common mechanism in social network analysis is some form of direct transmission from node to node.<sup>278</sup> This transfer can be one of a set of ideas or of ego strength transfer but the underlying idea is that something flows along a network path from one node to the other. Thus, a pair of nodes (people) may exhibit similar attitudes or behavior because one node (person) has influenced the other, either directly or through a path of intermediaries. The strength of a node means that the node's contacts are "bound" together; they can communicate and coordinate to act as one, which creates a formidable "other" with whom to negotiate.<sup>279</sup> This concept is the basic principle behind the benefits of worker's unions and political alliances.

In contrast, a node also can play unconnected nodes against each other by dividing and conquering. It is also the basic principle behind the notion of an agent, someone who is "bound" to or acts in the interests of another.<sup>280</sup> In other words, people are connected and those connections have powerful influences over collective behavior. As part of a social network, individuals transcend themselves, for good or ill, and become a part of something much larger.<sup>281</sup> Connectedness carries with it radical implications for the way the human condition is understood. Social networks have value precisely because

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<sup>277</sup> Freeman, *The Development of Social Network Analysis—With an Emphasis on Recent Events*.

<sup>278</sup> Barry Wellman et al., "Computer Networks as Social Networks: Collaborative Work, Telework, and Virtual Community," *Annual Review of Sociology* 22 (1996): 213–38.

<sup>279</sup> Ibid.

<sup>280</sup> Borgatti et al., "Network Analysis in the Social Sciences."

<sup>281</sup> Nicholas A. Christakis and James H. Fowler, *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives* (New York: Little, Brown and Company, 2009), Kindle edition, 30.

they can help achieve what people could not achieve on their own.<sup>282</sup> For the work of homeland security practitioners across the world, this connectedness has powerful implications for collaborations that could increase resilience and survival. To understand how powerful social influence in social networks can be, a study on obesity demonstrates this point.

## **2. Case Study: Obesity and Social Network Analysis: The Framingham Study**

The growing obesity epidemic provides fertile ground for applying social network analysis as a tool for understanding how relationships impact health. *The New England Journal of Medicine* published the findings of a study regarding social network analysis as a tool for understanding obesity.<sup>283</sup> This article is of particular significance because obesity is a multifaceted problem with underlying causes for which no easy answers are available. The research involved a quantitative analysis of the nature and extent of the person-to-person spread of obesity as a possible factor contributing to the obesity epidemic.<sup>284</sup> This longitudinal case study utilized body-mass index data available on 12,067 participants and their “ties” in the famed Framingham Study (Figure 5) over the years 1971–2003. The goal was to evaluate whether individual weight gain was a product of weight gain in close associations, such as friends, siblings, and spouses.

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<sup>282</sup>Christaki and Fowler, *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*, 31.

<sup>283</sup> Nicholas A. Christakis and James H. Fowler, “The Spread of Obesity in a Large Social Network Over 32 Years,” *The New England Journal of Medicine* 357, no. 4 (July 26, 2007): 370–379.

<sup>284</sup> *Ibid.*, 370.



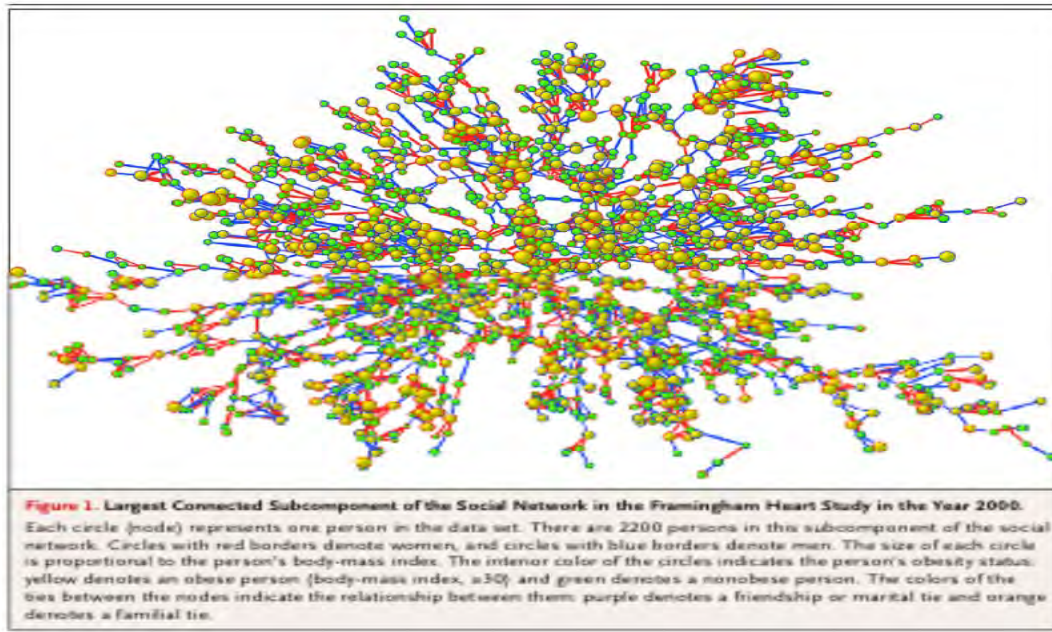


Figure 5. Social Network of Framingham Study, 2006<sup>285</sup>

Figure 5 examines the obesity association at a point in time—the year 2006. Clearly visible clusters of obese persons in the network can be seen, as demonstrated by centrality, the distance of each node to all others in the graph. The directed and undirected binary ties are strong enough to serve as a bridge between clusters and the density of the yellow clusters (obese persons) indicates tie strength within a cluster but not necessarily between clusters of obese persons. Although it is a social network analysis for a point in time, the strength of these relationships is evident in that peoples' chances of becoming obese increased if they had a friend, sibling, or spouse who was obese. Fortunately, the Framingham data is longitudinal and allows for detailed comparisons over time.

By analyzing the Framingham data, Christakis and Fowler found a solid basis for a potentially powerful theory, that behavior—like staying slender or being obese—pass from friend to friend almost as if they were contagious viruses.<sup>286</sup> This “contagious”

<sup>285</sup> Inga Kiderra, “Obesity Is ‘Socially Contagious,’ Study Finds,” July 25, 2007, <http://ucsdnews.ucsd.edu/archive/newsrel/soc/07-07ObesityIK-.asp>.

<sup>286</sup> Clive Thompson, “Are Your Friends Making You Fat?” *The New York Times*, September 12, 2009, [http://www.nytimes.com/2009/09/13/magazine/13contagion-t.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2009/09/13/magazine/13contagion-t.html?pagewanted=all&_r=0).

influence changed behavior just by socializing, person to person. Sociologists have suspected that behaviors were contagious back to the 1930s, as described in the Jacob Moreno sociograms.

The language of contagion is part of pop culture today, and it is common to talk about social changes as epidemics and those who exert outside influence as “superconnectors” (positive deviants) who can usher in trends into society almost single-handedly.<sup>287</sup> According to Christakis and Fowler, people are connected, and so their health is connected. In the study’s summary, they said, “You may not know him personally, but your friend’s husband’s co-worker can make you fat. And your sister’s friend’s boyfriend can make you thin.”<sup>288</sup>

The essential insight from the case study for homeland security practitioners is that social influence, superconnectors, and contagion are also applicable to resiliency matters of homeland security. Fostering resilient behaviors in the community can have a contagious influence on others in the community, which spreads, and thus creates a new social construction. The subconscious nature of emotional mirroring has emergent properties. If sitting beside a person who eats more can affect an individual’s behavior, why would this same mirroring not play out with preparedness and response behaviors as well? Moreover, would it not be a valuable insight and potential tool, in highly volatile crowds, to find those community superconnectors to display calm? Christakis and Fowler point out social contagion could even help explain the existence of altruism. Another key finding is that many people are not necessary to create a contagion, just the right person. With obesity, the study found that for people to lose weight, putting them in small clusters of people was helpful, which points to the powerful implications of community engagement for resilient behaviors homeland security wants to foster at the lowest level.

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<sup>287</sup> Thompson, “Are Your Friends Making You Fat?”

<sup>288</sup> Christakis and Fowler, “The Spread of Obesity in a Large Social Network Over 32 Years,” 370–379.

## **D. CONCLUSION**

Assessing the power of a social network to influence those in it, and the critical individuals who can change behavior, it is clear that the homeland security enterprise could benefit by incorporating SNA of communities triaging limited resources to where they are needed and best utilized most. The context that restores community is one of possibility, generosity, and gifts, rather than one of problem solving, fear, and retribution. In this context, communities are human systems given form by conversations that build relatedness. The conversations that build relatedness most often occur through associational life, throughout which citizens show up by choice, and rarely in the context of system life; citizens show up out of obligation.<sup>289</sup> Therefore, homeland security practitioners embedded into and accepted by the community have the potential to influence the behaviors of people and systems.

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<sup>289</sup> Block, *Community: The Structure of Belonging*, 29.

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## V. CONCLUSION

This thesis proposes a dramatic shift away from a top-down, military-based, command and control, linear, expert-driven framework to one in which homeland security becomes the stagehand to activating the power of people in community.

Everything is connected. Everyone and everything including the animal world and the environment have vital impacts on homeland security because of their complex and adaptive connections. Due to this interconnectedness, social constructionism provides an opportunity to craft an alternative future for homeland security. Social constructionism is an active forward thinking, future oriented concept and if fully understood, could dramatically impact the way homeland security shapes the future connections. As a forward thinking tool, social constructionism can manipulate the words, actions, and symbols toward more resiliency, including tapping the unused resources of the hearts and minds of the American people.

For most of this nation's history, the American homeland security enterprise has constructed a deficient-oriented discourse. Historically, it has been the standard model and approach. The reason traces to deeply ingrained views that those at the top of a hierarchy know more than those below, and that change is most efficiently driven top down and outside in.<sup>290</sup> Deficient-oriented discourse is pervasive throughout the world and the primary means through which most people tackle change.<sup>291</sup> Many leaders, field workers, facilitators, and consultants tend to identify gaps, cultivate lessons learned, devise initiatives to fill them, and create institutions dependent on top-down premises. Even when done with good intent, this approach may be largely ineffectual, insofar as it ignores a great big elephant in the room, social complexity.<sup>292</sup> The social complexity of the globe provides both opportunity and challenge for the homeland security enterprise.

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<sup>290</sup> Thomas Petzinger, *The New Pioneers: The Men and Women Who Are Transforming the Workplace and Marketplace* (New York: Simon & Schuster, 1999), 6.

<sup>291</sup> Rachel Amato and Jim Armstrong, "Exploring Positive Deviance Further," *Governance.com*, 7, July 2010, [http://governance.server304.com/wp-content/uploads/2011/10/Exploring\\_Positive-Deviance.pdf](http://governance.server304.com/wp-content/uploads/2011/10/Exploring_Positive-Deviance.pdf).

<sup>292</sup> *Ibid.*

However, the homeland security enterprise's understanding of new tools that facilitate communication and the ability for groups to form networks can lead to powerful insights on the collective behavior of individuals and communities to foster resiliency without outside assistance. Homeland security's event-driven approach to addressing vulnerabilities fails to recognize that security works best when it is integrated into the normal course of daily life of business and community.<sup>293</sup>

When security becomes a reactive enterprise, pursued only after threats become manifest, the effort ends up being costly, ugly, and largely ineffective. Americans do not expect their lives to be risk-free and have proven themselves to be up to the task for playing an important role in securing the homeland. In summary, a paradigm shift is occurring through emerging technologies and adaptive systems that can provide some insight into the nation's future resilience. The homeland security enterprise has become so locked within a problem-centered, critique-driven worldview that it has severely limited its potential for innovation and transformation.<sup>294</sup>

A future homeland security narrative could be strengthened by utilizing an AI framework that examines the nation's strengths and assets. This framework is a shift from a deficient and lessons learned discourse to an appreciative AI discourse which means pivoting from looking backwards at mistakes to being proactive and building a system of resiliency for the future. This shift of focus from programs to systems that are complex and adaptive is fostered by new ways of communication in interaction in agencies and communities.

#### **A. ENGAGEMENT FOR AND BY EVERYONE**

Homeland security professionals would do well to change the narrative and seek to integrate equal access and participation of the local communities into all aspects of planning. The only thing holding the homeland security ecosystem back from providing

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<sup>293</sup> Flynn, *America the Vulnerable: Struggling to Secure the Homeland*, 895–898.

<sup>294</sup> Barrett and Fry, *Appreciative Inquiry—A Positive Approach to Building Cooperative Capacity*, 420–421.

and planning with and for citizens during times of grave danger is an unwillingness to hammer out the details in advance and a reluctance to invest in the capacity to do so.<sup>295</sup>

Consider these numbers, according to a Congressional Research Service report, between 2001 and 2011, Congress approved \$1.28 trillion dollars for the Operation Enduring Freedom (OEF) Afghanistan and other counter terror operations; Operation Noble Eagle (ONE), providing enhanced security at military bases; and Operation Iraqi Freedom (OIF).<sup>296</sup>

That amount translates into a burn-rate of \$350 million for each and every day for the last 10 years. By contrast, the cost of one-hour of these war operations—\$15 million—has been the most that has been invested in the entire annual budget for the Citizens Corps Program, which was initiated after 9/11 to engage citizens in the homeland security mission to volunteer to support emergency responders.<sup>297</sup>

Engagement can and does translate to the homeland security realm. Recommendations include the following.

- Educate all stakeholders in plain language what complex problems are and how they manifest in communities.
- Utilize a collaborative strategy that includes strengths-based community asset mapping to tackle complex problems instead of deficient-oriented needs and weakness mapping. Possible solutions to problems involve changing the behavior and/or gaining commitment from individuals in the homeland security ecosystem.
- Implement a preparedness strategy that incentivizes individuals to take action in their local communities by providing “resiliency enhancement tax credits.”<sup>298</sup> Behavioral economists widely recognize that even making minor financial incentives can succeed in motivating individuals to make life-affirming decisions when it comes to their safety of themselves, their

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<sup>295</sup> Flynn, *The Edge of Disaster: Rebuilding a Resilient Nation*, 868–870.

<sup>296</sup> Amy Belasco, *The Cost Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11* (CRS Report no. RL33110) (Washington, DC: Congressional Research Service, 2011), <http://www.fas.org/sgp/crs/natsec/RL33110.pdf>.

<sup>297</sup> *The New Homeland Security Imperative: The Case for Building Greater Societal and Infrastructure Resilience* (2011), 4 (testimony of Stephen Flynn to the Committee on Homeland Security and Governmental Affairs of the U.S. Senate).

<sup>298</sup> Philip J. Palin, “Perspectives on Preparedness: Nudging Us Forward a Bit,” *Homeland Security Watch*, October 29, 2010. <http://www.hls-watch.com/2010/10/29/perspectives-on-preparedness-nudging-us-forward-bit-by-bit/>.

neighbors, and local community.<sup>299</sup> Financial economists calculate that every dollar spent on preparing for a natural disaster saves seven dollars in response.<sup>300</sup>

- The DHS should drive increased funding down to the local community to assist peer-to-peer community efforts that support resiliency.
- Encourage community-oriented think tanks so that all ideas are on the table. No one has to wait for a sequestered group of people who sit in isolation to come up with group ideas to “pass down” to the community. The community itself knows what it needs.

## **B. THE ECOSYSTEM APPROACH**

Twelve years have passed since the creation of the DHS. If the department were a human, it would be on the cusp of being a teenager. Twenty-two agencies, each with its own social identity and unique skill sets, were instructed to act as one. The DHS has been going through the social construction of its new identity over the last 12 years. While it has evolved significantly over time to address a myriad of challenges, it still struggles to be as resilient and agile as it needs to be. For the most part, the 22 DHS agencies are still siloed in their initial social identity. The initial creation of the DHS reflects an arrangement and placement of programs and services, although the challenges the department faces are centered around complex-adaptive systems, which are often socially based.

Part of understanding social complexity is looking at self-organizing human systems, which are connected to complex adaptive systems. Complex adaptive systems are self-organizing, but they differ from other self-organizing systems in that they learn to adapt to changes in their environment. A complex adaptive system is formally defined as a system of independent agents that can act in parallel, develop “models” as to how things work in their environment, and, most importantly, refine those models through learning and adaptation. The *homeland security enterprise* over the years has really morphed into a *homeland security ecosystem*.

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<sup>299</sup> Palin, “Perspectives on Preparedness: Nudging Us Forward a Bit.”

<sup>300</sup> Flynn, *The Edge of Disaster: Rebuilding a Resilient Nation*, 2557–2558.



Webster's definition of an ecosystem is "the complex of a community of organisms and its environment functioning as an ecological unit."<sup>301</sup> Arthur Tansley first published the term in a British publication, when he first drew attention to the importance of materials between organism and their environment.<sup>302</sup> Ecosystems are best understood in the context of a biological ecosystem in which living and non-living organisms exist in an ever changing environment that responds to disruption. To use this biological metaphor for the homeland security ecosystem, both are controlled by external and internal factors and function within a climate of threats and opportunities. Both systems are dynamic and subject to disturbance and recovery processes. Complex problems often occur within ecosystems. It is a key conclusion of the literature around complex problems that the social complexity of challenges, rather than their technical complexity, overwhelms most current problem solving and project management approaches. Solutions to complex problems usually involve coordinated action by a range of stakeholders, including organizations (government agencies at the federal, state, and local levels), non-profit organizations, private businesses, and individuals.<sup>303</sup>

In 2002, 22 federal agencies were joined into one to create the DHS. Over the last 12 years, for the most part, except for FEMA, most have been located centrally in Washington, D.C., This centralized system results in a sluggish and lumbering system that struggles for timely and consistent responses to challenges under its own weight. Even though a centralized system is easy to understand, change initiatives are rigid and organizational rollouts for services are cumbersome and standardized.

As described by Brafman and Beckstrom in their text, *The Starfish and the Spider*, spider organizations are closed and centralized. Starfish organizations are open and decentralized. If the head of the spider is cut off, it dies but if one of the legs of the starfish is cut off, it is able to regenerate itself and keep going. Starfish organizations are able to respond more quickly because each member has access to knowledge and the

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<sup>301</sup> "Ecosystem," accessed October 7, 2014, <http://www.merriam-webster.com/dictionary/ecosystem>.

<sup>302</sup> Arthur G. Tansley, "The Early History of Plant Biology in Britain," *JSTOR: Journal of Ecology*, 35, December 1947. doi: <http://www.jstor.org/stable/2256503>.

<sup>303</sup> Lynelle Briggs, *Tackling Wicked Problems: A Public Policy Perspective* (Canberra, Australia: Australian Public Service Commission Commonwealth of Australia, 2007), 2.

ability to make direct use of it. Additionally, an open system does not have central intelligence; the intelligence is spread throughout the system and they can mutate to fit the challenge.<sup>304</sup> Probably the most important aspect of a decentralized (starfish) organization is that once people are put in on open system, they automatically want to contribute.<sup>305</sup> Disasters, manmade or natural, do not stop at state boundaries. A decentralized networked governance would empower a strategy of systematic collaboration, coordination, and integration for policy development and foster alignment of resources, services, and operation execution for challenges to the nation.

Attempts have been made in the past to conceptualize a non-linear community engagement model. In 2006, Booz Allen developed a DHS Operations Community Model for the Department of Homeland Security.<sup>306</sup> Also, a decentralized model was developed for the Intelligence Community by the Rand Corporation in 2009 (Figure 6).<sup>307</sup>

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<sup>304</sup> Brafman and Beckstrom, *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations*, 40.

<sup>305</sup> Ibid., 74.

<sup>306</sup> Ibid.

<sup>307</sup> Gregory F. Treverton, *Reorganizing U.S. Domestic Intelligence: Assessing the Options* (Santa Monica, CA: Homeland Security Center and Intelligence Policy Center, RAND Corporation, 2008).

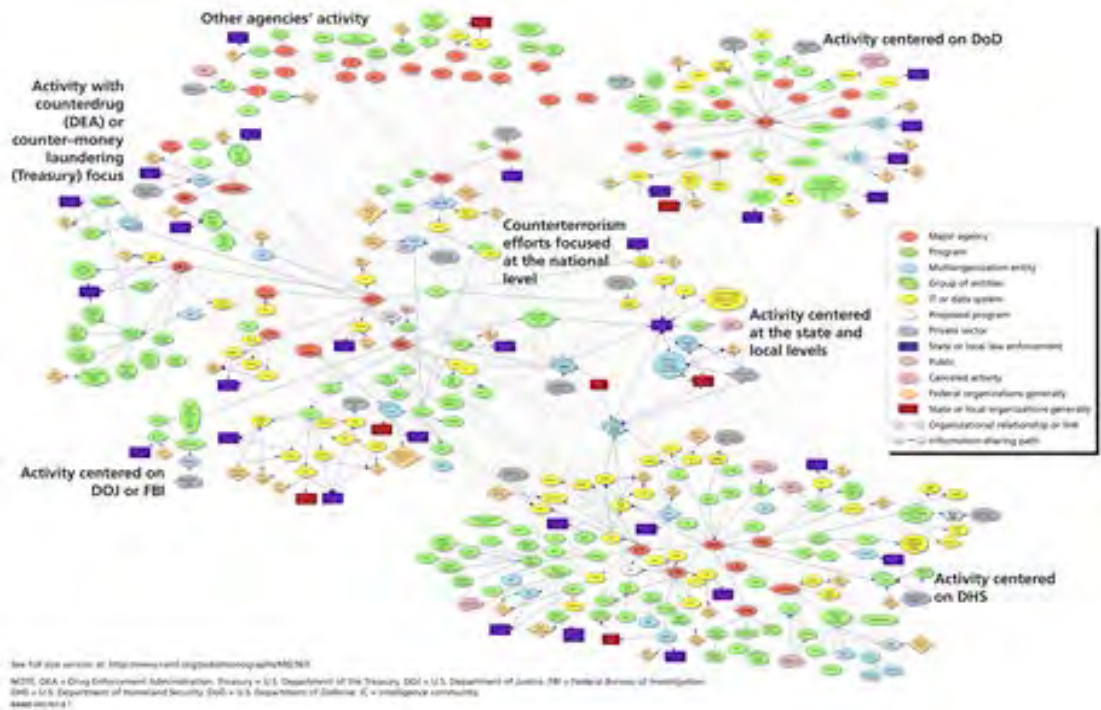


Figure 6. Intelligence Community, Developed by Rand Corporation in 2009<sup>308</sup>

To create a new homeland security ecosystem through networked governance, the DHS should consider the feasibility of developing regional DHS collaboratives. The DHS collaboratives would be arranged by their function: protection, preparedness, intelligence, mitigation, recovery, public health and cyber. Based on function, state, local, federal, and tribal entities would work together on regional issues. The regional collaborative could use the current 10 FEMA regions structure to include collaborators from each of the 22 DHS agencies. These regional DSHS collaboratives emphasis would be to foster collaborative networks in the region, which would be more open, agile, adaptive, flexible, and connected to the stakeholders within the region. These collaborative networks would be able to tap into the diverse community social networks within the region during disasters.

<sup>308</sup> Bellavita, "Changing Homeland Security: The Year in Review—2008," Originated from *Mission Blueprint*, commissioned from Booz Allen Hamilton by the Office of Operations Coordination (OPS) at the Department of Homeland Security, 2006–2007.

Within the 10 DHS regional collaboratives, the enterprise could study the challenges for the DHS using three framework elements that recognize complex adaptive systems instead of the systems-of-programs.

- Study how interactions, either human or infrastructure-based, give rise to patterns of behavior within the homeland security ecosystem.
- Invest time in understanding the ways of describing complex systems and problems to the homeland security ecosystem.
- Study and evaluate the process of formation of complex systems and problems through pattern formation and evolution in the homeland security ecosystem.<sup>309</sup>

### C. COLLABORATIVE STRATEGY

To foster full inclusion of diverse stakeholders, including non-profit organizations, private businesses, community members, and all levels of government, the complex ecosystem of problems must be tackled. Professor Nancy Roberts suggests that the key consideration is how power is dispersed among the stakeholders.

She identifies three possible strategies.<sup>310</sup>

- **Authoritative strategy:** An authoritarian strategy gives the problem to a group of stakeholders considered experts for the problem and agree to abide by their decisions. Other stakeholders also agree to abide by their decisions. The Supreme Court and the Federal Reserve are examples of an authoritative strategy. A key advantage for the authoritarian strategy is it is used when efficiency and timeliness are paramount.
- **Competitive strategy:** A competitive strategy leverages influence, market share, and power with the assumption that the stakeholders assume a win-lose outcome. This strategy can foster innovation and creativity but also include conflict and stalemates.
- **Collaborative strategy:** A collaborative strategy is best when dealing with complex problems because power is dispersed among all stakeholders that often leads to sustained behavioral change by the stakeholders. A collaborative strategy is a win-win outcome for

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<sup>309</sup> Author adapted the three framework elements for a homeland security ecosystem by Jay Forrester, "Counterintuitive Behavior of Social Systems," *Technology Review*, no. 73 (1971): 52.

<sup>310</sup> Nancy Roberts, "Coping with Wicked Problems" (working paper, Department of Strategic Management, Naval Postgraduate School, 2000).

stakeholders. A key advantage of this strategy is stakeholder commitment, comprehensive commitment, and effective solutions that are pliable to the changing nature of social complexity.

#### **D. REFLECTIONS**

The author began the thesis with the word “imagine.” Imagine is not only a forward-thinking conceptualization, but also an invitation to connect seemingly disparate concepts, people, and things in a completely different way. Americans are living in a time of great threat to this nation but also in a time of great opportunity.

People in communities all across the nation are gathering, forming unique partnerships, collaborating on diverse projects and interactive work that are changing the homeland security landscape. This nation’s current and future diversity, fueled by a younger generation ready to take over the homeland security ecosystem as the first digital natives, is very hopeful.

The author believes the truth, yet to be acknowledged, is that disruptive community engagement is already occurring in unique ways, which are empowered by technology, smart devices, and creative innovation. People are no longer waiting to be told what to do and how to do it. They are taking matters into their own hands. The author also believes the homeland security enterprise has really morphed into an ecosystem, but it just has not caught up with the change and its organizational structure does not represent it.

Now some 14 years since inception of a homeland security enterprise, it may be time to reconfigure a new mission. Peter Drucker, management consultant and social ecologist, promotes that an effective mission statement must have three elements that describes the mission: *opportunities, competence and commitment*.<sup>311</sup> Envisioning a homeland security ecosystem that describes its opportunities, its competence, and its commitment is a proactive appreciative social construction more geared toward the future than a reactive mission of security against terrorism and all hazards. This distinction is important; the acts of homeland security leadership shifts to facilitating the “capacity

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<sup>311</sup> Peter F. Drucker, *The Five Most Important Questions you Will Ever Ask About Your Organization* (Hoboken, NJ: Wiley, 2011), Kindle edition, 14.

within the human community to shape its future;”<sup>312</sup> no longer looking to an individual to save the day but to facilitate human communities to shape their own future. It is within this context that the ecosystem can do the following.

- Imagine finding community superconnectors and positive deviants who have unique special gifts of bringing the community together in the worst and best of times.
- Imagine crafting messages of hope and strength during times of great peril.
- Imagine unthinkable threats and handing over power of curiosity, innovation, and effort to community to help solve problems.
- Imagine not measuring security in equipment and money but in the power of the community to adapt and change.
- Imagine being relentlessly optimistic instead of relentlessly pessimistic.
- Imagine teaching U.S. children that preparedness is a civic duty and responsibility in a world in which volatility and uncertainty are the new normal.
- Imagine a future in homeland security where activity shifts from correcting to innovating.
- Imagine understanding that social media is not about technology and speaking *at* people but about people’s sociology<sup>313</sup> and speaking *with* people.
- Imagine a future in homeland security when communities are so resilient that in the face of trauma, they can maintain their core capacity to continue to function as a community without outside help.
- Imagine a homeland security ecosystem that shifts from absurdly prescriptive rules to describing the goal and allowing the community to use their own creativity and initiative to get there.<sup>314</sup>

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<sup>312</sup> Notter and Grant, *Humanize: How People-Centric Organizations Succeed in a Social World*, 57.

<sup>313</sup> Brian Solis, *Engage! Revised and Updated: The Complete Guide for Brands and Businesses to Build, Cultivate, and Measure Success in the New Web* (Hoboken, NJ: Wiley, 2011), Kindle edition, 5.

<sup>314</sup> Cass Sunstein, *Simpler, The Future of Government* (New York: Simon & Schuster, 2013), Kindle edition, 11.

It is quite possible to imagine people all across the United States, in a human ecosystem—a collective of communities, diverse by nature, resilient by history and creative by choice, cannot only prevail in the face of adversity—but prosper.

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## LIST OF REFERENCES

- Alberti, Marina. "Planning Under Uncertainty: Regime Shifts, Resilience, and Innovation in Urban Ecosystems." *The Nature of Cities*, January 22, 2013. <http://www.thenatureofcities.com/2013/01/22/planning-under-uncertainty-regime-shifts-resilience-and-innovation-in-urban-ecosystems/>.
- Alberti, Marina. *Advances in Urban Ecology: Integrating Humans and Ecological Processes in Urban Ecosystems*. New York: Springer, 2008.
- Amato, Rachel, and Jim Armstrong. "Exploring Positive Deviance Further." Governance.com, July 2010. [http://governance.server304.com/wp-content/uploads/2011/10/Exploring\\_Positive-Deviance.pdf](http://governance.server304.com/wp-content/uploads/2011/10/Exploring_Positive-Deviance.pdf).
- Appleseed Foundation. *A Continuing Storm: The On-Going Needs of Hurricane Katrina Evacuees*. Washington, DC: Appleseed Foundation, 2006.
- Arquilla, John, and David Ronfeldt. *The Advent of Netwar*. Santa Monica, CA: RAND Corporation, 1996.
- Bach, Robert, and David Kaufmann. "A Social Infrastructure for Hometown Security: Advancing the Homeland Security Paradigm." *Homeland Security Affairs*, May 2009. <http://www.hsaj.org/?fullarticle=5.2.2>.
- Barnes, Fred. "America and Its Immigrants." *The Weekly Standard*. Accessed April 24, 2014. [https://www.weeklystandard.com/articles/america-and-its-immigrants\\_740069.html](https://www.weeklystandard.com/articles/america-and-its-immigrants_740069.html).
- Barrett, Frank, and Ronald E. Fry. *Appreciative Inquiry—A Positive Approach to Building Cooperative Capacity*. Taos, NM: Taos Institute Publications, 2012. Kindle edition.
- Bavelas, Alex. "Communication Patterns in Task-Oriented Groups." *Journal of Acoustical Soc. America* 22 (1950): 725–730.
- Belasco, Amy. *The Cost Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11* (CRS Report no. RL33110). Washington, DC: Congressional Research Service, 2011. <http://www.fas.org/sgp/crs/natsec/RL33110.pdf>.
- Bellavita, Christopher. "Changing Homeland Security: Shape Patterns, Not Programs—Volume II. no. 3. *Homeland Security Affairs*, October 2006. <http://www.hsaj.org/?article=2.3.5>.
- . "Changing Homeland Security: The Year in Review—2008, *Homeland Security Affairs*, January 2009. <http://www.hsaj.org/?article=2.3.5>.

- . “What Is Preventing Homeland Security?.” *Homeland Security Affairs* I, no. 1 (Summer 2005): 1–11. <http://www.hsaj.org/?article=1.1.3>.
- Berger, Peter L., and Thomas Luckmann. *The Social Construction of Reality; a Treatise in the Sociology of Knowledge*. Garden City, NY: Doubleday, 1966.
- . *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Open Road Media, 2001. Kindle edition.
- Biewald, Lukas, and Leila Janah. “Crowdsourcing Disaster Relief.” TechCrunch, August 21, 2010. <http://techcrunch.com/2010/08/21/crowdsourcing-disaster-relief/M>.
- Blair, Eric. “Peer-to-Peer Economy Thrives as Activists Vacate the System.” September 27, 2013. <http://www.activistpost.com/2013/09/peer-to-peer-economy-thrives-as.html>.
- Block, Peter. *Community: The Structure of Belonging*. San Francisco, CA: Berrett-Koehler Publishers, 2009. Kindle edition.
- Blum, Stephanie Cooper. “Chapter 5: The Department of Homeland Security and Intelligence: Past, Present, and Future.” In *Homeland Security and Intelligence*. Santa Barbara, CA: Praeger Security International, 2010.
- Boase, Jeffrey, John B. Horrigan, Barry Wellman, and Lee Rainie. *The Strength of Internet Ties*. Washington, DC: American Life Project, Pew Research Center, January 25, 2006.
- Bongar, Bruce, Lisa M. Brown, Larry E. Beutler, and Philip G. Zimbardo. *The Psychology of Terrorism*. Oxford, England: Oxford University Press, 2008.
- Borgatti, Stephen, Ajay Mehra, Daniel J. Brass, and Giuseppe Labianca. “Network Analysis in the Social Sciences.” *Science* 13 (2009): 892–895.
- Brafmana, Ori, and Rod A. Beckstrom. *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations*. New York: Penguin Group US, 2006. Kindle edition.
- Briggs, Lynelle. *Tackling Wicked Problems: A Public Policy Perspective*. Canberra, Australia: Australian Public Service Commission Commonwealth of Australia, 2007.
- Brown, Tim, and Barry Kätz. *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. New York: Harper Business, 2009.
- Bush, George W. *The National Strategy for Homeland Security*. Washington, DC: Office of Homeland Security, 2002.

- Butterfoss, France Dunn, Robert M. Goodman, and Abraham Wandersman. "Community Coalitions for Prevention and Health Promotion." *Health Education Research* 8, no. 3: (1993): 315–330.
- Chavis, David M., and Abraham Wandersman. "Sense of Community in the Urban Environment: A Catalyst for Participation and Community Development," *American Journal of Community Psychology* 18, no. 1 (1990): 55–81.
- Christaki, Nicholas A., and James H. Fowler. *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. New York: Little, Brown and Company, 2009. Kindle edition.
- . "The Spread of Obesity in a Large Social Network Over 32 Years." *The New England Journal of Medicine* 357, no. 4 (July 26, 2007): 370–379.
- Christensen, Clayton M. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston, MA: Harvard Business School Press, 1997.
- Christensen, Clayton M., Jeff Dyer, and Hal Gregersen. *The Innovator's DNA: Mastering the Five Skills of Disruptive Innovators*. Boston, MA: Harvard Business Review Press, 2011. Kindle edition.
- Chubb, Mark. "Crowdsourcing Solutions." Homeland Security Watch, March 17, 2010. <http://www.hlswatch.com/2010/03/17/crowdsourcing-solutions/>.
- Cialdini, Robert B. *Influence: The Psychology of Persuasion*. New York: Collins, 2007.
- Cohen, Jon, and Gary Langer. "Poll: Confidence in Anti-Terror Response Drops." *ABCnews.com*, October 9, 2005. <http://abcnews.go.com/Politics/PollVault/story?id=1189755&page=1>.
- Cooperrider, David L. "Positive Image, Positive Action: The Affirmative Basis of Organizing." *Stipes.com*, September 20, 2001. <http://www.stipes.com/aichap2.htm>.
- Cooperrider, David L., and Diana Whitney. *Appreciative Inquiry: A Positive Revolution in Change*. San Francisco, CA: Berrett-Koehler, 2005.
- Cross, Robert, and Andrew Parker. *The Hidden Power of Social Networks*. Boston, MA: Harvard Business School Press, 2004.
- Crossett, Kristen M., Thomas J. Culliton, Peter C. Wiley, and Thomas R. Goodspeed. *NOAA's National Ocean Service: Population Trends Along the Coastal United States: 1980–2008*, September 4, 2004. [http://oceanservice.noaa.gov/programs/mb/supp\\_cstl\\_population.html](http://oceanservice.noaa.gov/programs/mb/supp_cstl_population.html).

- Day, Jamison M. "Fostering Coordination Without Unity of Command." Presentation, Naval Postgraduate School, Capitol Region Campus, Global Border's College, Advanced Training Center, Harper's Ferry, West Virginia, February 17, 2014.
- de Sola Pool, Ithiel, and Manjked Kochen. "Contacts and Influence." *Social Networks* 1, no. 1 (1978): 5–51.
- Department of State Office of the Historian. "National Security Act of 1947." Accessed April 23, 2014. <https://history.state.gov/milestones/1945-1952/national-security-act>.
- DHS Office of Inspector General. "FEMA: In or Out?" Homeland Security Digital Library (February 2009): 1–20. <https://www.hsdl.org/?view&did=229723>.
- Diamandis, Peter H., and Steven Kotler. *Abundance: The Future Is Better than You Think*. New York: Free Press, 2012.
- Doherty, Carroll, and Danielle Gewurz. *Trust in Government Nears Record Low, But Federal Agencies Are Viewed Favorable*. Washington, DC: U.S. Pew Research Center, 2013.
- Donnan, Susan. "What Is Appreciative Inquiry?" Metavolution. Accessed December 5, 2014. [http://www.metavolution.com/rsrc/articles/whatis\\_ai.htm](http://www.metavolution.com/rsrc/articles/whatis_ai.htm).
- Drucker, Peter. "The New Demographics: How to Live with an Ageing Population." *The Economist*, November 1, 2001. <http://www.economist.com/node/770839>.
- . "The Way Ahead: The Time to Get Ready for the Next Society Is Now." *The Economist*, November 1, 2001. <http://www.economist.com/node/770887/print>.
- Drucker, Peter F. *The Five Most Important Questions you Will Ever Ask About Your Organization*. Hoboken, NJ: Wiley, 2011. Kindle edition.
- Duggan, Maeve, and Aaron Smith. "Social Media Update 2013." *Pew Research Center*, December 30, 2013. [http://www.pewinternet.org/files/2013/12/PIP\\_Social-Networking-2013.pdf](http://www.pewinternet.org/files/2013/12/PIP_Social-Networking-2013.pdf).
- Fawcett, Stephens B., Adrienne Paine-Andrews, Vincent Francisco, and M. Vliet. "Promoting Health through Community Development." In *Promoting Health and Mental Health in Children, Youth and Families*, edited by David S. Glenwick and Leonard A. Jason. 233–55. New York: Springer Publishing Company, 1993.
- Federal Emergency Management Agency (FEMA). *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*. Washington, DC: Department of Homeland Security, 2011. [http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole\\_community\\_dec2011\\_\\_2\\_.pdf](http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole_community_dec2011__2_.pdf).

- . *Overview of the National Planning Frameworks*. Washington, DC: Department of Homeland Security, 2013.
- . *Strategic Foresight Initiative, U.S. Demographic Shifts: Long-term Trends and Drivers and Their Implications for Emergency Management*. Washington, DC: Department of Homeland Security, 2011.
- . *The National Preparedness Goal*. Washington, DC: Department of Homeland Security, 2011.
- Florin, Paul, and Abraham Wandersman. “An Introduction to Citizen Participation, Voluntary Organizations, and Community Development: Insights for Empowerment Through Research.” *American Journal of Community Psychology* 18, no. 1 (1990): 41–55.
- Flynn, Stephen. *America the Vulnerable: Struggling to Secure the Homeland*. New York: Harper Collins, 2004. Kindle edition.
- . “Recalibrating Homeland Security: Mobilizing American Society to Prepare for Disaster.” *Foreign Affairs*, May/June 2011.
- . *The Edge of Disaster: Rebuilding a Resilient Nation*. New York: Random House, 2007. Kindle edition.
- Flynn, Stephen, and Scott Bates. *Connecting America: Building Resilience with Social Media*. Washington, DC: Center for National Policy, 2011.
- Forrester, Jay. “Counterintuitive Behavior of Social Systems.” *Technology Review*, no. 73 (1971): 52–68.
- Freeman, Linton C. *The Development of Social Network Analysis: A Study in the Sociology of Science*. Vancouver: Empirical Press, 2004.
- . *The Development of Social Network Analysis—With an Emphasis on Recent Events*. Irvine, CA: University of California-Irvine 2004.
- Freeman, Linton C., and Cynthia M. Webster. “Interpersonal Proximity in Social and Cognitive Space.” *Social Cognition*, 12 (1994): 223–247.
- Gell-Mann, Murray. *The Quark and the Jaguar*. New York: Freeman, 1994.
- Gibson Mary Jo, with Michele Hayunga. “We Can Do Better: Lessons Learned for Protecting Older Persons in Disasters.” AARP, 2006. <http://assets.aarp.org/rgcenter/il/better.pdf>.
- Gladwell, Malcolm. *The Tipping Point: How Little Things Can Make a Big Difference*. New York: Little Brown and Company, 2006.

- Godoy, Maria. "Katrina: One Year Later Tracking the Katrina Diaspora: A Tricky Task." National Public Radio, July 25, 2013.
- Goodread. "Buckminster Fuller Quotes." 2014. <http://www.goodreads.com/quotes/13119-you-never-change-things-by-fighting-the-existing-reality-to>.
- Government Accountability Office. *Federal Workforce: Recent Trends in Federal Civilian Employment and Compensation*. (GAO-14-215). Washington, DC: U.S. Government Accountability Office, 2014. <http://www.gao.gov/assets/670/660449.pdf>.
- Green, Lawrence W., and Shawna L. Mercer. "Can Public Health Researchers and Agencies Reconcile the Push from Funding Bodies and Pull from Communities?" *American Journal of Public Health and the Nation's Health* 91, no. 12 (December 2001): 1926–943. doi:10.2105/AJPH.35.12.1319.
- Gupta, Amit, and S. Anish. "Insights from Complexity Theory: Understanding Organizations Better." *Tejas@iimb*. Accessed April 30, 2014. <http://tejas.iimb.ac.in/articles/12.php?print=true>.
- Hammond, Mathew Carlton. "The Posse Comitatus Act: A Principle in Need of Renewal." *Washington University Law Quarterly*, Summer 1997. <http://www.wulaw.wuslt.edu/75-2/75-2-10.html>.
- Hampton, Keith N., Lauren Sessions Goulet, Lee Rainie, and Kristen Purcell. "Social Networking Sites and Our Lives." Pew Research Center, June 16, 2011. <http://www.pewinternet.org/2011/06/16/social-networking-sites-and-our-lives/>.
- Herrup, Katherine. "Boatlifters: The Untold Story of 9/11." *Reuters News Service*, September 9, 2011. <http://blogs.reuters.com/katharine-herrup/2011/09/09/boatlifters-the-unknown-story-of-911/>.
- History.com. "Hurricane Katrina." Accessed October 6, 2013. <http://www.history.com/topics/hurricane-katrina>.
- Hocevar, Susan Page, Erik Jansen, and Gail Fann Thomas. "Inter-Organizational Collaboration: Addressing the Challenge." 10 Years After: The 9/11 Essays, *Homeland Security Affairs* 7, September 2011.
- Homans, George C. *The Human Group*. New York, Harcourt, Brace and Company, 1950.
- Hsu, Spencer S. "Katrina Report Spreads Blame." *Washington Post*, February 12, 2006. <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/11/AR2006021101409.html>.

- InventorSpot. "6 Degrees + 1 Game Theory = Social Network Analysis." Accessed November 15, 2014. [http://inventorspot.com/articles/6\\_degrees\\_1\\_game\\_theory\\_social\\_network\\_analysis\\_31847](http://inventorspot.com/articles/6_degrees_1_game_theory_social_network_analysis_31847).
- Johnstown Area Heritage Association. "History of the Johnstown Flood." Accessed November 9, 2014. <http://www.jaha.org/FloodMuseum/history.html>.
- Keneally, Meghan. "Ferguson Braces for Grand Jury's Michael Brown Decision." *ABC News*. Accessed November 13, 2014. <http://abcnews.go.com/US/ferguson-braces-grand-jurys-michael-brown-decision/story?id=26886727>.
- Kiderra, Inga. "Obesity Is 'Socially Contagious,' Study Finds." July 25, 2007. <http://ucsdnews.ucsd.edu/archive/newsrel/soc/07-07ObesityIK-.asp>.
- Krebs, Vladis E. "Uncloaking Terrorist Networks." *First Monday*, 7 no. 4 (April 1, 2002). <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/941/>.
- Kretzmann, John, and John McKnight. *Building Communities from the Inside Out: A Path toward Finding and Mobilizing a Community's Assets*. Evanston, IL: The Asset-Based Community Development Institute, Northwestern University, 1993.
- Lee, Keevan. "The Big List of 189 Words That Convert." Buffer Social. Accessed August 19, 2014. <https://blog.bufferapp.com/words-and-phrases-that-convert-ultimate-list>.
- Levy, Jay A., and Bernice A. Pescosolido. *Social Networks and Health*. Amsterdam, Holland: Elsevier, 2002.
- Lewicki, Roy J., and Edward C. Tomlinson. "Trust and Trust Building." Edited by Guy Burgess and Heidi Burgess, Conflict Information Consortium, University of Colorado, Boulder. Posted December 2003. <http://www.beyondintractability.org/essay/trust-building>.
- Lewis, Sarah. *Appreciative Inquiry for Change Management: Using AI to Facilitate Organizational Development*. Center City Philadelphia: Kogan Page, 2011. Kindle edition.
- Li, Charlene, and Josh Bernoff. *Groundswell*. Cambridge, MA: Harvard Business Publishing Creative Center, Vook, Inc., 2011.
- Locke, Joanne. "A History of Plain Language in the United States Government." Plain Language.gov. Accessed March 28, 2014. <http://www.plainlanguage.gov/whatisPL/index.cfm>.
- Ludema, James D. "From Deficit Discourse to Vocabularies of Hope: The Power of Appreciation." *Stipes*, 2001. <http://www.stipes.com/aichap29.html>.

- Magsino, Sammantha L. *Applications of Social Network Analysis for Building Community Disaster Resilience: Workshop Summary*. Washington, DC: National Academies Press, 2009. Kindle edition.
- Matofska, Benito. "What Is the Sharing Economy?" Accessed November 21, 2014. <http://www.thepeoplewhoshare.com/blog/what-is-the-sharing-economy/.S>.
- McKnight, John, and Peter Block. *The Abundant Community: Awakening the Power of Families and Neighborhoods*. Chicago, IL: American Planning Association, 2010.
- McMillan, Elizabeth. *Complexity, Organizations and Change*. London and New York: Routledge, 2004.
- Mechling, Jerry. "Will Massive Collaboration Work for You?" *Governing Technology*, January 28, 2009.
- Merriam-Webster. "Ecosystem." Accessed October 7, 2014. <http://www.merriam-webster.com/dictionary/ecosystem>.
- . "Trust." Accessed May 2, 2014. <http://www.merriam-webster.com/dictionary/trust>.
- Metropolitan Revolution, The. "The Metropolitan Revolution—Videos." Accessed November 15, 2014. <http://metrorevolution.org/videos/>.
- Mischel, Walter, and Yuichi Shoda. "A Cognitive-Affective System Theory of Personality: Reconceptualizing Situations, Dispositions, Dynamics, and Invariance in Personality Structure." *Psychological Review* 102, no. 2 (1995): 246–268.
- Mitchell, Melanie. *Complexity: A Guided Tour*. Oxford: Oxford University Press, 2009. Kindle edition.
- Moghaddam, Fathali M., and James N. Breckenridge. "The Post-Tragedy Opportunity Bubble and the Prospect of Citizen Engagement." 10 Years After: The 9/11 Essays, *Homeland Security Affairs* 7 September 2011.
- Mood, Robert, and Dennis Smith. "History of Fire Fighting." A Fire Pro. Accessed April 16, 2014. <http://www.afirepro.com/history.html>.
- Moreno, Jacob L. *Who Shall Survive?*. Washington, DC: Nervous and Mental Disease Publishing Company, 1934.
- Morton, John Fass. *Next-generation Homeland Security: Network Federalism and the Course to National Preparedness*. Annapolis, MD: Naval Institute Press, 2012.



- National Archives and Records Administration. "The Constitution of the United States: A Transcription." Accessed April 23, 2014. [http://www.archives.gov/exhibits/charters/constitution\\_transcript.html](http://www.archives.gov/exhibits/charters/constitution_transcript.html).
- National Council on Disability. "Hurricane Katrina Affected Areas." September 2, 2005. <http://www.ncd.gov/newsroom/publications/2005/katrina2.htm>.
- . *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*. Washington, DC: National Council on Disability, 2006.
- Notter, Jamie, and Maddie Grant. *Humanize: How People-Centric Organizations Succeed in a Social World*. Upper Saddle River, NJ: Pearson Education, 2011. Kindle edition.
- O'Leary, Rosemary, and Nidhi Vij. *Collaborative Public Management: Where Are We and Where Are We Going?* Syracuse, NY: The Maxwell School of Syracuse University, 2012.
- O'Neill, Caitria. "How Communities Bounce Back from Disaster." *CNN*, September 2, 2012. <http://edition.cnn.com/2012/09/02/opinion/oneill-disaster-recovery/index.html>.
- . "What We Don't Understand About Trust." Speech, Ted.com, House of Parliament, Great Britain, London, June 2013.
- Obama, Barack. *Empowering Local Partners to Prevent Violent Extremism in the United States*. Washington, DC: Office of the President of the United States, 2011. [http://www.whitehouse.gov/sites/default/files/empowering\\_local\\_partners.pdf](http://www.whitehouse.gov/sites/default/files/empowering_local_partners.pdf).
- Palin, Philip J. "Perspectives on Preparedness: Nudging Us Forward a Bit." *Homeland Security Watch*, October 29, 2010. <http://www.hlswatch.com/2010/10/29/perspectives-on-preparedness-nudging-us-forward-bit-by-bit/>.
- Panel Report. *Psychological Aspects of United States Strategy, Panel Report to Nelson A. Rockefeller, Special Assistant to the President, White House*, HR70-14 ed., Homeland Security Database, November 1, 1955.
- Parsons, Brian, and Debra Fulmer. "The Paradigm Shift for Planning for Special Needs Populations." U.S. Department of Education. 2007. [http://rems.ed.gov/docs/SpecialNeeds\\_ParadigmShiftInPlanning\\_2007.pdf](http://rems.ed.gov/docs/SpecialNeeds_ParadigmShiftInPlanning_2007.pdf).
- Pascale, Richard T., Jerry Sternin, and Monique Sternin. *The Power of Positive Deviance: How Unlikely Innovators Solve the World's Toughest Problems*. Boston, MA: Harvard Business Press, 2010. Kindle edition.

- Pascale, Richard, Mark Milleman, and Linda Gioja. *Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business*. New York: Crown Publishing Group, 2001. Kindle edition.
- Petzinger, Thomas. *The New Pioneers: The Men and Women Who Are Transforming the Workplace and Marketplace*. New York: Simon & Schuster, 1999.
- Pew Research Center RSS. "Baby Boomers Retire." December 29, 2010. <http://www.pewresearch.org/daily-number/baby-boomers-retire>.
- Putnam, Robert D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster, 2000.
- Rainie, Harrison, and Barry Wellman. *Networked: The New Social Operating System*. Cambridge, MA: MIT Press, 2012.
- Ram, Preetha. "From One-to-one to Many-to-many: Powering Peer Learning in Open Learning Environments." [Elearnmag.acm.org](http://elearnmag.acm.org/featured.cfm?aid=2537893&rss=true). October 2013. <http://elearnmag.acm.org/featured.cfm?aid=2537893&rss=true>.
- Ramo, Joshua Cooper. *The Age of the Unthinkable: Why the New World Disorder Constantly Surprises Us and What to Do about It*. New York: Little, Brown and Company, 2009.
- Reese, Shawn. *Defining Homeland Security: Analysis and Congressional Considerations* (CRS Report No. R42462). Washington, DC: Congressional Research Service, 2013.
- Reeve, Hamilton. "The Huddled Masses." *The Texas Tribune*, August 30, 2010. <http://www.texastribune.org/2010/08/30/five-years-houstonians-conflicted-about-katrina/>.
- Referral Pattern. "Referral Patterns & Spheres of Influence, Building Sociograms." Accessed December 5, 2014. <http://www.referralpattern.com/4.html>.
- Ressler, Steve. "Social Network Analysis As an Approach to Combat Terrorism: Past, Present and Future Research." *Homeland Security Affairs* II, no. 2 (July 2, 2006). <http://www.hsaj.org/?fullarticle=2.2.8>.
- Reston, James. "Big Four Conference Opens Today; West's Chiefs Complete Strategy on Germany, Disarming, Security." *New York Times*, July 18, 1955.
- Riding, Alan. "Glimpses of a Genius Who Blazed His Paper Trail." *The New York Times*, September 25, 2006. [http://www.nytimes.com/2006/09/26/arts/design/26leon.html?\\_r=0](http://www.nytimes.com/2006/09/26/arts/design/26leon.html?_r=0).

- Ripley, Amanda. *The Unthinkable: Who Survives When Disaster Strikes—and Why*. New York: Crown Publishing Group, 2008.
- Roberts, Nancy. “Coping with Wicked Problems.” Working paper, Department of Strategic Management, Naval Postgraduate School, 2000.
- Sageman, Marc. *Understanding Terror Networks*. Philadelphia: University of Pennsylvania Press, 2004.
- Sauter, Mark, and James Jay Carafano. *Homeland Security: A Complete Guide*. New York: McGraw-Hill, 2012.
- Shirky, Clay. *Cognitive Surplus: Creativity and Generosity in a Connected Age*. New York: Penguin Group US, 2010. Kindle edition.
- . *Here Comes Everybody: The Power of Organizing without Organizations*. New York: Penguin Press, 2008.
- . “Transcript of How Cognitive Surplus Will Change the World.” June 2010. [http://www.ted.com/talks/clay\\_shirky\\_how\\_cognitive\\_surplus\\_will\\_change\\_the\\_world?language=en](http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world?language=en).
- Solis, Brian. “Digital Transformation Is About Empathy First and Technology Second.” Brian Solis RSS, November 10, 2014. [http://www.briansolis.com/2014/11/digital-transformation-empathy-first-technology-second/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+briansolis+%28Brian+Solis%29](http://www.briansolis.com/2014/11/digital-transformation-empathy-first-technology-second/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+briansolis+%28Brian+Solis%29).
- . *Engage! Revised and Updated: The Complete Guide for Brands and Businesses to Build, Cultivate, and Measure Success in the New Web*. Hoboken, NJ: Wiley, 2011.
- Stephenson, David W., and Eric Bonabeau. “Expecting the Unexpected: The Need for a Networked Terrorism and Disaster Response Strategy.” *Homeland Security Affairs* III, no. 1, February 2007.
- Sugerman, Helene C. “The Navy Case: Bold and Enlightened Naval Leaders at Every Level.” Appreciative Inquiry Commons, 2001. <http://www.appreciativeinquiry.case.edu/intro/bestcasesDetail.cfm?coid=3D3509>.
- Sunstein, Cass. *Simpler, The Future of Government*. New York: Simon & Schuster, 2013.
- Tansley, Arthur G. “The Early History of Plant Biology in Britain.” *JSTOR: Journal of Ecology*, 35, December 1947. doi: <http://www.jstor.org/stable/2256503>.
- Taylor, Paul. *The Next America: Boomers, Millennials, and the Looming Generational Showdown Public Affairs*. Washington, DC: Pew Research Center, 2014. Kindle edition C.

- Taylor, Paul, Carroll Doherty, Kim Parker, and Vidya Krishnamurthy. *Millennials in Adulthood, Detached from Institutions, Networked with Friends*. Washington, DC: Pew Research Center, 2014.
- Texas Health and Human Services Commission. *Hurricane Katrina Evacuees in Texas*. Austin, TX: Texas Health and Human Services Commission, 2006.
- Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New Haven, CT: Yale University Press, 2008.
- Thompson, Clive. "Are Your Friends Making You Fat?" *The New York Times*, September 12, 2009. [http://www.nytimes.com/2009/09/13/magazine/13contagion-t.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2009/09/13/magazine/13contagion-t.html?pagewanted=all&_r=0).
- Thys, Fred. "Social Networking Sites Help Monson Rebuild After Tornado." WBUR. June 13, 2011. <http://www.wbur.org/2011/06/13/monson-sisters>.
- Topping, Alexandra. "Reykjavik's Radical Mayor Blazes a Trail for the Revolution in Digital Democracy." *The Guardian*, April 25, 2013. <http://www.theguardian.com/world/2013/apr/25/reykjavik-mayor-digital-democracy>.
- Treverton, Gregory F. *Reorganizing U.S. Domestic Intelligence: Assessing the Options*. Santa Monica, CA: Homeland Security Center and Intelligence Policy Center, RAND Corporation, 2008.
- U.S. Census Bureau. *Number of Persons 65+, 1900–2060, Population Estimates and Projections*. Suitland, MD: U.S. Census Bureau, 2010.
- United States Department of Health and Human Services. "The Great Pandemic: The United States in 1918–1919." Accessed April 16, 2014. [http://www.flu.gov/pandemic/history/1918/the\\_pandemic/index.html](http://www.flu.gov/pandemic/history/1918/the_pandemic/index.html).
- Vincent, Grayson K., and Victoria A. Velkoff. "The Next Four Decades: The Older Population in the U.S. 2010–2050: Population Estimates and Projections." U.S. Census, May 2010. <http://www.census.gov/prod/2010pubs/p25-1138.pdf>.
- Walter, Ekaterina. "Reaping the Benefits of Diversity for Modern Business Innovation." *Forbes*, January 14, 2014. <http://www.forbes.com/sites/ekaterinawalter/2014/01/14/reaping-the-benefits-of-diversity-for-modern-business-innovation/>.
- Wasserman, Robert. *Building Communities of Trust*. Washington, DC: U.S. Department of Justice, Office of Community Oriented Policing Services, July 2010. [http://www.cops.usdoj.gov/files/RIC/Publications/e071021293\\_buildingcommtrust\\_revision.pdf](http://www.cops.usdoj.gov/files/RIC/Publications/e071021293_buildingcommtrust_revision.pdf).

- Watkins, Jane M., and Bernard Mohr. "Appreciative Inquiry Commons: AI History and Timeline." Appreciative Inquiry Commons. Accessed August 22, 2014.  
[http%3A%2F%2Fappreciativeinquiry.case.edu%2Fintro%2Ftimeline.cfm](http://3A%2F%2Fappreciativeinquiry.case.edu%2Fintro%2Ftimeline.cfm).
- Watts, Duncan J., and Steven H. Strogatz. "Collective Dynamics of 'Small-World.'" *Networks Nature* 393, no. 6684 (1998): 440–442.
- Wellman, Barry, Janet Salaff, Dimitrina Dimitrova, Laura Garton, Milena Gulia, and Caroline Haythornwaite. "Computer Networks as Social Networks: Collaborative Work, Telework, and Virtual Community." *Annual Review of Sociology* 22 (1996): 213–38.
- Yen, Hope. "Census: White Majority in U.S. Gone by 2043." *NBC News*, June 13, 2013.  
[http://usnews.nbcnews.com/\\_news/2013/06/13/18934111-census-white-majority-in-us-gone-by-2043?lite](http://usnews.nbcnews.com/_news/2013/06/13/18934111-census-white-majority-in-us-gone-by-2043?lite).
- Zolli, Andrew, and Ann Marie Healy. *Resilience: Why Things Bounce Back*. New York: Free Press, 2012.

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